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Annual REPORT

OF THE
COMMISSIONER OF DOMINION PARKS
FOR THE
YEAR ENDED MARCH 31
1909

1908/09



PART V., ANNUAL REPORT, 1909

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PART V

DOMINION PARKS

DOMINION PARKS

REPORT OF THE COMMISSIONER OF DOMINION PARKS.

DEPARTMENT OF THE INTERIOR,

BANFF, ALBERTA, July 15, 1909.

To the Honourable FRANK OLIVER,
Minister of the Interior,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my first annual report as commissioner of Dominion parks for the fiscal year ending March 31, 1909.

It is a source of very great pleasure to me to be able to report that with each succeeding year the popularity of Canada's western recreation grounds is increasing with rapidity that has far exceeded the most sanguine expectations of those who a few years ago saw the immense possibilities of these parks as a pleasure and health resort. The usefulness of these parks is becoming more and more recognized as they become better known, and their future development and expansion will, it is expected, be much more rapid than in the past. The remarkable growth of interest manifested in these charming resorts is not only very marked in the increasing number of temporary summer visitors and tourists, but in the rapidly increasing numbers of permanent residents in the town of Banff. The presence of an up-to-date school of three rooms in charge of a competent staff of teachers and fully equipped with modern educational facilities, is having the effect of inducing many families to take up their residence in Banff for a part of each year.

During the past ten years there has been an increase of almost five hundred per cent in the number of visitors to the different mountain parks, as may be seen by the comparative figures compiled for each year since 1899, which are as follows :—

Year.	No. of Visitors.
1899.....	7,389
1900....	6,533
1901....	8,456
1902....	8,516
1903....	10,696
1904....	11,752
1905....	17,605
1906....	30,136
1907 (9 months)....	288,735
1908....	32,209
1909....	39,780

In the above figures I have not included the very large number of persons who visit the parks on excursions for a day and who do not register at the hotels, &c. Among the visitors were people from almost every country of the world, no less than forty-five different nationalities being represented last year. I may say that every one of them has gone away charmed and delighted with the scenic wonders of Canada's national parks.

During the past year the parks were visited by an unusually large number of British, eastern Canadian and American press associations and delegations consisting of many of the leading magazine and newspaper writers in those countries. On their return home well-written leading articles descriptive of the grandeur of the mountains,

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valleys, waterfalls, caves and other wonders which they saw, made known to hundreds of thousands of their readers that Canada has beauty spots to make men happy as well as fertile plains to make them wealthy.

They were also particularly impressed with the cosmopolitan character of the people met at the different resorts in the park. One of them, an extensively travelled and leading newspaper writer of New York, remarked: 'Between New York and Shanghai, where I spent five years, there is no spot more cosmopolitan than the rotunda of the Canadian Pacific Hotel at Banff.' After noting some of the men that he had met in far distant parts of the world and whose acquaintance he had renewed on his visit to Banff, he said: 'The women in this group of people in the rotunda of the hotel are dressed as attractively as any women in any hotel in the world, and when the orchestra plays and the people move about talking to each other I could imagine myself in Buenos Ayres, in Bombay, in Melbourne, in Malta, in Cape Town or in any other city in which the currents of world traffic come together.'

The tide of travel for the season of 1909 has commenced in an unprecedented volume, and already the accommodation of the parks is taxed to its utmost limit, and judging from present indications it is confidently expected that it will be almost double in volume that of any former year. This is due in a great measure to the crowds of people from eastern Canada, the eastern and New England states who are visiting the Alaska-Yukon Exposition at Seattle, and are taking advantage of the opportunity of seeing the magnificent scenery of the Canadian mountains, either on their going or homeward trip. A very large percentage of these stop off for a day or two and many of them for a longer period at some of the resorts in the mountain parks. The task of providing for the comfort and accommodation of so many of these pleasure-seekers, in addition to the regular number of visitors and tourists, necessarily involves a large amount of extra work for the staff at each park.

THE TOWN OF BANFF.

The town of Banff, the business centre of the Rocky Mountains Park and the chief objective point for tourists, is an up-to-date little town of close to one thousand permanent residents, which is generally increased to about fifteen hundred during the summer months by temporary residents who either own or lease cottages which they occupy from two to six months each year.

Eight excellent hotels and six livery barns well supplied with saddle horses and carriages cater to the tourist and other trade for trips to the many points of interest to which roads and trails lead from the town. Outfitting stores of all kinds furnish supplies to the residents or camping parties at reasonable prices.

The town is supplied with all modern utilities in the way of electric light, water and sewer systems, telephone exchange connected with the Alberta government long-distance telephone system, churches, schools, fraternal societies, athletic and social clubs, &c.

The principal streets are all well graded and gravelled, but a large amount of work is required to be done each year in keeping up new streets where new houses are being built, extending to water and sewer system, regrading streets which are torn up by the extension of the water works and sewer system.

OTHER IMPROVEMENTS IN THE PARK.

In addition to the large amount of necessary work done last year in the maintenance and repair of the roads and trails in the town of Banff and other parts of the park a considerable amount of new work was undertaken. In the town about a mile of street was regraded and gravelled and a cinder path constructed from the Bow River bridge to the Banff Springs Hotel, a distance of about three-quarters of a mile.

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Six miles of new road was constructed between Canmore and Exshaw, to facilitate communication by rigs between those two points. This new road will also form a part of the proposed coach road from Calgary to Banff, on its part of which the provincial government of Alberta is doing a considerable amount of work each year. It is expected that the road for this entire distance will be completed in another year and made passable for all kinds of vehicles.

Three miles of road were built as an extension of the road from Laggan to Moraine lake in the valley of the Ten Peaks. It is hoped to have the remaining three miles of this road to the lake completed this year.

With the additions made during the past year there are now in operation and in a good state of repair nearly eighty miles of carriage road at Banff, nineteen miles at Laggan, and thirty-five miles at Field.

I am glad to be able to report that notwithstanding the greatly increased travel over them there has not been a single serious accident or any unnecessary delay on any of them.

THE MUSEUM AND GROUNDS.

The number of visitors to the museum as shown by the report of the curator (which is appended), continues to increase each year and is one of the chief attractions of the park. The different specimens of the big game, the smaller mammals, the fish and bird-life, the flora and minerals of the park are proving a continued source of interest to the lay visitor as well as to the student of natural science. Its educative value in enabling the visitors to classify the different specimens of plants and rocks which they find in their tours is greatly appreciated, so much so that an appreciative visitor styled it 'The University of the Hills.'

To the younger generation of the visitors the mounted specimens of wild animals, birds and insects and the caged live animals are a source of great interest and delight. The additions to the specimens last year included the head of an elk which was killed in a fight with another elk, some birds, &c.

The wild animals confined in the new cages have been in perfectly good health and condition during the year, and have taken very kindly to their enforced captivity in their new homes and appear to enjoy their comfortable and clean environments. The animals confined in them at present are :—

Black bear....	1
Brown bear..	1
Cinnamon bear....	1
Mountain lions....	1
Timber wolves....	2
Coyotes...	2
Kit fox....	3
Red fox...	2
Lynx....	2
Racoons....	2
Badgers....	2
Marmots....	2

During the year a considerable amount of work was done on the grounds to make it more convenient and comfortable for visitors to see the animals in captivity. This included the completion of a gravelled drive around the grounds, a cinder path between and around the cages, fencing, levelling, draining and filling low ground, &c.

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THE SULPHUR BATHS. •

The revenue from the baths at the Cave and Basin continues steadily to increase and the number of bathers who enjoyed their beneficent and curative waters during the past year was greatly in excess of that of any previous year since the baths were opened. This was the case, notwithstanding the growing popularity of the baths at the Hot Springs.

In my report of last year I drew your attention to the inadequacy of the accommodation at the Cave and Basin for the swarms of bathers who patronize it especially during the months of July and August. Intending bathers have in many cases every day during those months to wait for a considerable length of time before they can secure a dressing room.

At the Hot Springs baths the lack of sufficient accommodation is even more apparent. At no season of the year can the number of bathers be satisfactorily accommodated and during the hot summer months large numbers of intending bathers are, owing to the lack of accommodation, unable to secure baths.

The erection of a large up-to-date bath-house at the Hot Springs, equipped with all the latest modern conveniences is imperative if the baths are to continue to increase in popularity, as no doubt they will. In my opinion the revenue would increase in proportion to the expenditure and be a good paying investment for the department.

It may be of interest to the public to reproduce the report of the analyst of the Canadian government, who says officially :—

‘The water is free from organic impurities and gives no albuminoid nitrogen. Each gallon contains dissolved sulphuretted hydrogen to the amount of 0.3 grains (equivalent to 0.8 cubic inch).

‘The dissolved solids are as follows :—

‘Chloride (in chlorides).....	0.42 grains.
‘Sulphuric acid (SO ₃)..	38.50 “
‘Silica (SiO ₂)..	2.31 “
‘Lime (CaO)..	24.85 “
‘Magnesia (Mg)..	4.87
‘Alkalis (as Soda, Na ₂ O).....	0.62 “
‘Lithium	a decided trace.

‘The temperature of the spring is 114.3 degrees Fahrenheit.’

During the year a large number of complete and permanent cures of diseases, especially of rheumatism and other blood diseases, were reported as a result of the curative qualities of the Banff sulphur water baths.

ANIMALS IN THE PADDOCKS.

The animals in the paddocks at Banff continue to be one of the most popular of the attractions in the park and the caretaker's register shows a largely increased number of visitors each year. Especial interest is taken by them in the herd of buffalo, as being the relics of the countless monarchs of the plains, which but for the action of the Interior Department of the government of Canada would have been doomed to total extinction.

That there has not been a large natural increase during the year is accounted for by the fact that the paddock in which they are inclosed has become entirely too small for such a large herd and the animals are too much crowded for successful breeding. It is my intention during this year to have the majority of them removed to one of the large buffalo parks, leaving about twenty-five or thirty head at Banff. This number will be quite sufficient for the purpose for which the animals are kept at Banff.

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The small increase in the number of the other animals is due almost entirely to the destruction of their young by coyotes and wolves. A wire inclosure to keep out these carnivorous and destructive animals will be built during the year, which will ensure the protection of the young animals from their enemies. It is only by experience that the best way of caring for wild animals in such partial captivity and under such circumstances can be learned and this appears to me to be the best way of protecting them.

It is with regret that I have to report the death of 'Sir Donald,' the patriarch of the buffalo herd, whose tragic end occurred early in March, he having been gored to death by a number of young buffalo bulls.

For several years it had been the intention to preserve and take the best of care of 'Sir Donald' as a matter of scientific historical interest in ascertaining the longevity of the buffalo race. For that reason he was cared for until he became too decrepit from age to care for himself. When he was attacked by the younger bulls and knocked down, he was helpless to defend himself and the aged hero was gored and trampled beyond recognition, in which condition he was found next morning. There is not the slightest doubt but that 'Sir Donald' was the last specimen of the buffalo that a few years ago roamed the prairie at will in their wild free state. He was captured as a buffalo calf by the Indians in 1872 and was consequently in his thirty-eighth year at the time of his death. His history during his thirty-seven years of captivity has been one of romantic interest to thousands of people as the sole survivor of a noble type of animals, that in their wild state have become only a memory to Indians, buffalo hunters and old-time white pioneers.

Shortly after his capture he was sold by the Indians to Mr. James McKay, then chief factor for the Hudson's Bay Company at Fort Garry, and afterwards became a part of and headed the herd of Sir Donald A. Smith (now Lord Strathcona) at Silver Heights. In 1898 Lord Strathcona donated the remnant of his herd, consisting of thirteen animals, among which was 'Sir Donald,' to the National Park at Banff, to be cared for as the wards of the Canadian government.

It had been intended to have the skin preserved and mounted as a whole specimen for the new national museum at Ottawa, but unfortunately his carcass was so gored and disfigured beyond recognition that this was impossible. The head has, however, been preserved and is now being mounted and will serve in a measure as a memento of the last and noblest specimen of the buffalo of the by-gone days.

The animals now in the paddocks are as follows :—

Buffalo..	107	Increase..	14
Moose..	21	"	3
Elk..	15	"	3
Mule deer..	11		
Persian sheep..	3		
Angora goats..	6		
Virginia deer..	4		

The only antelope in the paddock was killed during the year by another deer.

THE COAL MINES.

The coal mines at Bankhead and Canmore have been in operation for almost full time during the year and the companies report a largely increased output over any former year in their history.

The capacity of the briquetting plant at Bankhead has been almost doubled owing to the rapidly increasing demand, and briquette bricks are largely used for steam purposes on the Western Division of the Canadian Pacific Railway. The Bankhead coal is the only anthracite coal found in western Canada.

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The high pressure air lines have been extended further into the mines and additional charging stations are being installed for the motors used in hauling the newly mined coal to the breakers. New workings are being driven north and south from the new slope below the tunnel level and the force of miners is being continually increased. As a consequence of this development and the employment of so many men in the mines, the town is in a prosperous condition and is rapidly increasing in size and population.

Considering that so many foreigners are employed, law and order are well observed and there is very little cause of complaint on this score.

At Canmore a new shaft, which almost doubles the capacity of the mines, was opened during the year about three miles east of the old shaft and the coal is mined from it.

A ready market is always available for the increasing tonnage mined owing to the fact that the Canadian Pacific Railway Company has contracted ahead for the total output of the mines. Canmore coal is considered the best steam coal on the entire Canadian Pacific Railway system and is largely used on the locomotives between Medicine Hat and Revelstoke.

PRESERVATION OF GAME AND TIMBER.

At the last session of parliament provision was made for the employment of three game and fire wardens and for combining the duties in connection with the protection of game and the prevention of forest fires in the Rocky Mountains Parks. These appointments have been made and the new wardens will enter on their duties with the beginning of the fiscal year.

They will patrol all portions of the parks and regular patrol trails and small cabins will be constructed in different portions of the parks where the men can remain over night and avoid the necessity of packing tents, &c., with them. Each will be furnished with a saddle pony and a pack pony carrying supplies, so that they can remain out for several days at a time or as long as their patrol duty in any locality may require. By this means it is hoped that the killing of game by the Indians and tourists, which in the past was not of uncommon occurrence in the outlying portions of the parks owing to insufficient patrol, may be checked if not altogether prevented.

The adoption of the proposed new regulations prohibiting the carrying of unsealed firearms by persons within the limits of the parks should also have a beneficial effect in the way of minimizing the temptation to shoot and kill game in the park.

The wild animals appear to be increasing in numbers, and the regulation prohibiting dogs running at large within the parks will doubtless have the effect of making the animals less timid at the approach of mankind and less fearful of their mortal enemies, dogs and guns.

The question of the prevention of forest fires in the parks is also very serious, and one which causes a great deal of anxiety, especially during the dry months of July and August. During the past year the expense in connection with fighting forest fires was much greater than in former years, but this additional expense was counterbalanced many times over by the saving from destruction of large quantities of fine valuable timber. The instituting of a systematic patrol and the adoption of more stringent regulations in respect to the care of camp-fires by tourists should have the effect of greatly reducing the danger from this source and assist us in the effort to preserve the forests of the parks in the state of primeval nature which is one of their chief charms.

THE ALPINE CLUB OF CANADA.

The Canadian Alpine Club, the headquarters of which is at Banff, was permanently organized three years ago and has at present a membership of over five hundred, among whom are numbered some of the most distinguished and enthusiastic mountain climbers in the world.

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A very successful camp was held last year, and under the able direction of Mr. A. O. Wheeler, F.R.G.S., president of the club, a number of difficult ascents, as far as known never previously attempted, were successfully accomplished. At the camp of last year all the leading alpine clubs of Europe and American were represented by experienced and ardent scalers of mountain peaks.

Membership in the club is divided into five grades: Honorary, consisting of persons distinguished in mountaineering, exploration or research; associates, who may be active members or may not but who contribute twenty-five dollars to the club's treasury; active members, who have made an ascent of at least ten thousand feet in some recognized alpine region or who have contributed to Canadian alpine literature by scientific publications based on personal experience; and grading members, who are given two years to qualify as active members.

Funds have been raised for the erection of a commodious up-to-date club-house at Banff, for the accommodation of the executive and members, which will be completed in time for the annual meeting of the club in July, 1909. The site selected is on the slope of the Sulphur mountain, near the middle hot springs and commands a magnificent view of the town of Banff, the Bow river and valley and of the surrounding mountains.

The club-house and tents to be erected by the club will furnish comfortable and commodious accommodation for over seventy-five persons.

It is also the intention of the club to build during the coming summer a smaller club-house at Lake O'Hara and later on houses in different localities in the park.

The scope of the work of the club is not confined entirely to climbing mountains during the summer camps, but to stimulate the members to do all in their power to promote the extension of knowledge of the scenic and other wonders to be found only in the Canadian Rockies and Selkirk mountains.

REVENUE OF THE PARK.

In my report of last year attention was drawn to the steady and continuous increase in the revenues of the park from nearly every source, and to the fact that the increase in appropriations by parliament for the extension of new work has not kept pace with the increase of revenue. It was estimated last year that over one and a quarter millions of dollars were spent in Canada by the tourists from foreign countries who visited the Rocky Mountains Parks, and it is expected that this amount will be almost, if not quite, doubled during the season of 1909.

The value of the parks as an asset of the Dominion of Canada cannot be measured by immediate results in dollars and cents, but they have been the means of spreading the fame and beauty of Canada to parts of the world where it otherwise would have been unheard of. Hundreds of visitors have said that they were induced to visit the Rocky Mountains Park through reports of its beauties given by tourists who had been there in former years. Its benefit to the Dominion of Canada, as a whole, as an advertising medium in the Department of Immigration alone, is of inestimable value, and it is doubtful if equal results for the money expended could be secured by any other means. Every additional dollar of expenditure on the national parks in the way of building and improving trails, carriage roads, bridges, &c., for the opening up of new points of interest and for making those already opened up more accessible, would, in my opinion, be money well invested and return a hundredfold in benefit to the country.

YOHO PARK.

During the past year about three miles were added to the carriage road up the Yoho valley leading to Takakkaw falls. In this were the most difficult portions of the road, including considerable heavy rock work and a couple of switch-backs put in to

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make the grade of the ascent easier. From the summit of the second switchback a magnificent view of the river valley below and Cathedral mountain in the back ground is obtained. From this point it is intended as soon as possible to construct a foot-path through the undergrowth to the river canyon about one hundred yards distant, and to have a number of rustic seats placed for the convenience and accommodation of tourists who will avail themselves of the opportunity of visiting this wonderful view. The narrow canyon is over one thousand feet deep, walled in on either side by almost perpendicular rock walls. Tourists from all parts of the world have pronounced this valley one of the most beautiful they had ever seen and the carriage road one of the best of mountain roads. When the remaining three and a half miles of extension to the falls is completed (which we hope to have done early in August) the drive will be one of the pleasantest and most beautiful in the entire Rocky Mountains Parks and cannot fail to prove of annually increasing popularity.

The Takakkaw Falls, themselves one thousand four hundred and sixty feet in height, are among the wonders of the world, far surpassing in grandeur, if not in volume of water, the famed Niagara Falls or the falls of the Yellowstone Park. Where necessary the road has been gravelled and a great many small bridges built across the small streams that rush down the mountain sides from the glaciers above. The completion of the Yoho valley carriage road will overcome the arduous climb over the summit on the trail from Emerald lake to the falls.

The right of way for a carriage road from the Emerald lake road to the natural bridge over the Kicking Horse river, two miles in length, was cleared during the year and the work of grading the road will be commenced on the completion of the Yoho valley road.

This natural wonder is about three miles from Field and at present is reached only by a foot-path, and the construction of a carriage road will afford visitors an opportunity of visiting this beautiful spot over a short and pleasant driveway.

In addition to this, considerable repair work was done on the Emerald lake and Ottertail carriage roads, in cleaning out culverts and ditches, rendered necessary by the spring snow and mud slides which are usual in all mountain regions. These roads were kept in good condition from their opening up in the spring until they were closed for the winter and necessarily entailed considerable labour and expense.

Repairs were also made to the pack trail from Hector station to Lake O'Hara along the valley of Cataract creek. The opening up and making easy of access of these new places of interest in the Yoho Park is having the effect of largely increasing the number of tourists who spend some time at the different resorts as may be seen by the records of the registers at the different hotels in another part of this report.

GLACIER PARK.

At Glacier Park most of the new work outlined in my report of last year was undertaken, in addition to the repair work which is necessary to maintain the trail from Glacier House, which suffers every year from slides. At the Caves, the ladders at the more dangerous places in the descent were replaced by wooden stairways and railings, the lumber for which was packed on ponies from the railway to the Caves. This improvement was deemed necessary in order that accidents to nervous visitors might be averted and to make access to the Caves easier by all classes of people. During the year over one thousand people visited and explored the Caves, and every one returned enchanted with the wonders they had seen in these quaint rock caverns eaten out by the water action of centuries.

The Cascade trail and the Asulkan Valley trail are also becoming very popular with tourists who linger for a few days at the Glacier House and wish to make easy excursions among the beautiful scenery in that vicinity.

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To the more ambitious the ascents of Mounts Abbott and Sir Donald offer ample opportunity for the powers of the most ardent mountain climbers.

I hope during the coming year to complete the trail mentioned in my report of last year connecting the trail from Rogers Pass to the head waters of Bear creek with the end of the present trail at the Caves. This will make a good trail for the round trip of about fifteen miles from Glacier House at a comparatively small cost, which will be of great interest and pleasure to tourists.

ELK ISLAND PARK.

Elk Island Park, with an area of sixty-four square miles, is located along the Canadian Northern Railway at Lamont Station, about forty miles east of Edmonton, in the Beaver Hills.

This park was originally acquired by the Alberta provincial government as a forest and game preserve. When the first and second shipments of buffalo were made from Montana in 1907 there was no other place to put them, consequently permission was obtained from the provincial government to range them in this park until such time as a larger and more suitable range could be acquired by the Dominion government. These two shipments numbered four hundred and ten head and have since temporarily ranged in the Elk Island Park.

When I was appointed commissioner of Dominion parks in 1908, this park was placed under my jurisdiction, but it is the intention during the present year to remove the buffalo to the new Buffalo Park which will be their future home, leaving about thirty-five head in the Elk Island Park to serve as the nucleus of another herd.

There are also in the park a considerable number of elk and deer, it being the natural home of these animals; when the fence was built they were inclosed in the park.

BUFFALO PARK.

The new Buffalo Park reserved by the Dominion government in 1907 as a grazing range contains four hundred and thirty square miles. It is located in townships 42, 43 and 44, ranges 6, 7, 8 and 9 west of the fourth principal meridian on the Grand Trunk Pacific Railway about one hundred and twenty miles east of Edmonton. The northern end of the park is within one-half mile of Wainwright, a railway divisional point and the southern boundary three miles from Rosyth station, on the Wetaskiwin branch of the Canadian Pacific Railway.

During the past year one hundred and ten thousand acres of Buffalo Park has been inclosed by a fourteen-strand wire fence, seventy-three miles in length, with two cross fences forming inclosures for the buffalo during the breeding season. The new park is a magnificent stretch of rolling prairie and numerous small lakes giving it a park-like appearance, and is in every respect an ideal place for the purpose to which it has been devoted. The large number of buffalo bones and skulls, buffalo wallows, and other evidence of their former occupancy found on it prove it to have been a favourite grazing ground for the herds of buffalo when in the wild state.

Besides the lakes, which furnish abundance of water for the animals, the Battle river passes through the western portion and Ribstone creek through the eastern part of the park. The banks of both streams are well wooded and form an excellent protection for the animals from the heat of summer and the storms of winter. The area inclosed at present is considered sufficient for the support of from five thousand to seven thousand head of buffalo. Hay is found in abundance in the eastern portion of the park and can be put up in stacks at a cost not exceeding from \$2 to \$2.50 per ton. In this item alone there will be a saving of several thousand dollars in favour of Buffalo Park as compared with Elk Island Park. This guarantees the maintenance of the buffalo at the lowest possible cost to the government.

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A fire-guard twenty feet in width has been ploughed around the inclosure, besides two cross fire-guards across the park. These were made with a view to not only protect the park from all danger of fire from without, but eventually to serve a double purpose of a carriage driveway around the park without entailing any extra expense to the department. It is also intended to move about eighty head of the buffalo now in the Rocky Mountains Park to Buffalo Park during the summer, where they will have freer range and better accommodation. Buildings for the accommodation of the caretaker's horses, &c., will be erected at Wainwright and also at the eastern end of the park where the animals will be wintered.

With the removal of the buffalo from Elk Island Park, the shipments yet to come from Montana and the surplus buffalo at Banff, there will be at least seven hundred head of buffalo in the herd before the close of the coming summer.

The cost of caring for the animals will be very small, as only about three men will be required in summer and five in winter.

With the expected annual natural increase of the herd of from one hundred and fifty to two hundred calves from the commencement, instead of the buffalo being an expense to the government they should prove a considerable source of revenue and be more than self-sustaining, as from the very start the surplus male stock can be readily disposed of at good prices.

The park being located near the main line of the Grand Trunk Transcontinental Railway, and near the point from which the branch to Calgary leaves the main line of the Grand Trunk Pacific Railway, thousands of visitors will be attracted to Buffalo Park each year to see the largest herd of buffalo in the world.

JASPER PARK.

I have as yet been unable to officially visit the Jasper Park--the latest addition to Canada's magnificent system of national park reserves--containing five thousand four hundred and fifty square miles of as yet almost entirely unexplored territory. I intend, however, to make a trip to this park during the month of August of this year, when I shall be able to report more fully upon it.

The only available recent information in regard to this park is obtained from a report of a trip made in 1908 through this territory by Mrs. Charles Schaffer, of Philadelphia, Pa., a celebrated botanist and traveller, who has been a regular annual visitor to the Canadian national parks for the past seventeen years. Mrs. Schaffer devotes the winter to lecturing on the results of her exploratory trips to remote parts of the Canadian Rockies and Selkirk ranges before scientific and literary associations in the leading cities of the United States. She has done more than any other living person in making known and arousing interest in the floral and other natural attractions of these regions for scientific research.

Mrs. Schaffer's report to me of her trip is as follows:—

'During the summer of 1908, a party of six, composed of Mr. Stewardson Brown, Botanist of the Academy of National Sciences, Philadelphia; Miss Adams, of New Haven, Connecticut; three guides and myself, left Laggan, Alberta, for an extended trip into the little-known hills lying to the north. Our outfit consisted of twenty-two horses with food sufficient (about two thousand pounds) for a four months' sojourn in a land where game though plenty is quite uncertain.

'We had two objects in view: Mr. Brown to make a more exhaustive study of the flora of the higher altitudes, Miss Adams and myself to search for a lake whose existence had been reported to us the year before by a Stony Indian.

'Our one guiding star was a decidedly dim one, a crude map drawn by the Indian, a grown man at the time; his sketch was from his memory when, as a small boy, he visited it with his father on a hunting expedition.

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'The first part of our trail lay for seventy-five miles through the National Park. The date of departure being June 8, we were forced, owing to its lower altitude, to use the Bow Pass, reaching it via Bow river and lakes. Though I have now travelled many hundreds of miles between Laggan and the Yellowhead Pass, this valley, near home, stands pre-eminent as the worst section for muskeg I have known. A partially constructed trail on the hill-side cancels a good deal of the explorer's trouble, but there are several miles still left through which to plough. From the Bow across Nigel Pass, then down a branch of the Brazeau to the outlet of Brazeau lake was an old story; from then on, the ground to be travelled was new. After crossing Pobocton Pass and traversing a goodly portion of the creek of the same name, all other maps than the Indian's ceased to be anything but a blank.

'The scenery, however, continued to be wild and beautiful, growing more interesting as we advanced. One or two valleys were penetrated on foot to see if the lake could be located. Finally, in the beginning of our third week from Laggan, we crossed a short pass of about seven thousand feet elevation and gazed down on one of the fairest grass-covered, flower-strewn valleys I have seen in the Canadian Rocky range.

'After traversing it for three days, our second in command climbed to a height of eight thousand feet and returned about 10.30 p.m. to report that the lake was at the terminus of the green valley.

'The following day we reached the shores of our long-sought goal. Plenty of feed was found for the horses a half mile back from the lake. A raft was soon constructed which carried tents, bedding and food for three days, and those most interested pushed for the head of the lake.

'Later developments proved the stretch of water to be about twenty miles long. At the outlet a fire a few years ago destroyed about one-quarter of a mile of timber, otherwise the slopes from tree line to shore are covered with a dense growth of spruce and pine. This growth is so heavy it is not only impracticable to take horses to the head of the lake, but even should they reach there there seems to be no grass for them.

'We found several fine peaks at the head of the lake, the conditions of the snow and ice proclaiming them between ten thousand and twelve thousand feet high. Glaciers swept down almost to the water's edge and at one place from a ragged rock precipice plunged a ribbon of water. In its thousands of feet fall, it was lost in spray. I think without exception it is one of the most beautiful sections I have ever visited, and the lake is undoubtedly the largest one yet recorded in the Rocky range. The outlet is comparatively a narrow one and looks quite harmless, but experience proved, at least during high water, that no horse could stem the flow with pack or saddle.

'Later investigation proved that this river empties into Medicine lake and from there as Maligne river flows into the Athabaska river, almost opposite to the mouth of the Miette river, which has its source in the Yellowhead Pass. Hence we have called the short pass, the stream flowing from it to the lake, the green valley, the lake itself and one of the peaks Maligne. Being but a matter of thirty to thirty-five miles south of the line of the advancing Grand Trunk Pacific road, it will undoubtedly at some future day become a famous resort for the lover of the beautiful.

'Since writing the above short sketch I have learned that the government has set aside 5,400 square miles (with Jasper House as a centre) of land as a national park. I can but trust that for the sake of the beauty of the lake, its almost unblemished forest and the game, Maligne lake may pass under the care of a government whose foresight and generosity to future lovers of the wild have been equalled by no other nation.

'MRS. CHARLES SCHAFER.'

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THE MONTANA HERD OF BUFFALO.

In connection with the balance of the shipment of buffalo purchased in 1907 from Michel Don Pablo, of Missoula, I have to report that owing to unforeseen and uncontrollable circumstances, we were unable to accomplish our purpose of having them transferred to Canadian soil during the year just closed.

Owing to sickness in his family and his own serious illness, Mr. Pablo was unable to commence the round-up of the animals until late in the season. I urged that operations should be started earlier, but it was not until my second visit to Montana in August that a move could be made. After several weeks of strenuous work we succeeded in gathering together in the corral one hundred and twenty of the animals preparatory to driving them thirty-six miles to be loaded on the train at Ravalli. On the night following their being corralled the enraged animals stampeded, climbed the high, almost perpendicular clay cut-bank at the rear of the inclosure and escaped to their native homes among the mountains of the Flathead reservation.

As it was getting late in the season and the early snows were falling in the mountains, which would render the difficulties in the way of again collecting the frightened animals insurmountable, we decided to abandon the attempt until the following spring. We were also induced to take this course, owing to the fact that after their recent exhausting struggle and flight for freedom, the animals were in very poor condition for shipment such a long distance so late in the season.

For the unsuccessful round-up, Mr. Pablo was at several thousands of dollars of expense for supplies, wages of men, &c., besides having a number of his horses disabled, for which he will not receive one cent of remuneration. He, however, acted throughout the whole affair in a perfectly honest and straightforward manner, and faithfully promised that as soon as the snow was off the ground sufficiently to allow of the animals being rounded up he would start his men to work. He is very anxious that his contract for the delivery of the entire herd to the Canadian government shall be carried out with as little delay as possible.

The result of our operations this year has been very disappointing to him and also to myself, as I had confidently expected this year to see the work of landing the buffalo at their future home in Buffalo Park on Canadian soil, reach a successful conclusion. I have every hope, however, that this will be successfully accomplished early in the next fiscal year.

Since the above was written, I am glad to be able to report that the first shipment consisting of one hundred and ninety head, one hundred and seventeen of which were young females, has been successfully landed in Buffalo Park, and the remainder, of about one hundred and twenty head, will be shipped early in the summer.

A new plan for transferring them from the corral to the loading pens was devised. Instead of the animals being driven in a herd they were transported individually in wagons over the thirty-six miles to Ravalli for loading. Experienced spectators of the work expressed their surprise and wonder at the magnitude of the task of rounding-up, transporting in wagons to the loading station and shipping over almost thirteen hundred miles of railway, such a large number of these wild, untamed animals and landing them successfully and safely in their new homes. The undertaking involved a vast amount of work, anxiety and expense, and it is doubtful whether a similar enterprise of rescuing from threatened extermination a once noble and numerous type of animal, was ever before undertaken.

A fuller and more detailed report of the shipments will be made in my next year's report, when I hope to be able to congratulate the government of the Dominion of Canada on having safely secured in its Buffalo Park reserve, the largest herd, not only of buffalo but of any wild animals in one inclosure, in the world.

In conclusion I desire to express my appreciation of the support which I have at all times received from the department in furthering the development of the Canadian

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national parks, and especially in the matter of securing the buffalo which would at times have been so discouraging as to suggest the abandoning of the undertaking entirely had I not been assured of the hearty support and co-operation of the Honourable Minister and every one connected with the department in the work.

I also wish to acknowledge the valuable services rendered by the members of the Royal Northwest Mounted Police in maintaining law and order in the different parts of the national parks where they were stationed.

I have the honour to be, Sir,

Your obedient servant,

HOWARD DOUGLAS,

Commissioner of Dominion Parks.

APPENDICES.

VISITORS AT HOTELS.

Number of visitors registered at the Banff Springs Hotel from April 1, 1908, to April 1, 1909 :—

Canada.....	2,318
United States....	4,082
England.....	384
Australia.....	62
Scotland.....	50
India.....	28
Japan.....	56
China.....	46
France.....	24
Honolulu.....	18
Ireland.....	37
New Zealand.....	64
Switzerland.....	3
Mexico.....	1
Norway.....	7
Italy.....	5
Holland.....	6
Denmark.....	4
Chili.....	2
Total.....	<hr/> 7,197 <hr/>

Number of visitors registered at the Mount Royal Hotel from April 1, 1908, to April 1, 1909 :—

Canada.....	1,240
United States.....	482
England.....	64
Scotland.....	22
Ireland.....	18
New Zealand.....	10
Australia.....	6
Italy.....	4

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China..	4
Germany...	2
Switzerland.. . . .	2
India..	1
Total....	1,955

Number of visitors registered at the Sanitarium Hotel from April 1, 1908, to April 1, 1909 :—

Canada....	6,018
United States.. . . .	1,490
England..	152
Scotland..	86
Ireland.....	42
Japan..	43
New Zealand.. . . .	72
Denmark.,	16
Australia..	80
India.....	8
China....	26
Holland....	10
Germany....	27
Chili....	14
Italy....	18
Switzerland.... . . .	41
Portugal..	16
Korea....	4
France....	14
Austria	2
Philippine Islands....	31
South Africa.... . . .	28
Total....	8,238

Number of visitors registered at the Hotel King Edward, from April 1, 1908, to April 1, 1909.

Canada....	4,284
United States.... . . .	1,282
England...	94
Scotland..	43
Ireland..	78
Switzerland.... . . .	6
New Zealand.. . . .	59
Australia..	28
South Africa..	1
Japan..	13
India....	4
Germany..	4
Austria...	4
China....	11
Total....	5,911

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Number of visitors registered at the Hot Springs Hydropathic Hotel, from April 1, 1908, to April 1, 1909 :—

Canada.....	792
United States....	204
England.....	22
Scotland.....	18
New Zealand....	9
Germany.....	6
Australia.....	9
Ireland.....	11
Japan.....	6
Total.....	<u>1,077</u>

Number of visitors registered at the Alberta Hotel from April 1, 1908, to April 1, 1909 :—

Canada.....	4,340
United States....	1,622
England.....	238
Scotland.....	209
Ireland.....	107
Sweden.....	22
New Zealand....	69
Australia.....	20
China.....	28
India.....	2
South Africa....	1
Germany.....	6
Total.....	<u>6,664</u>

Number of visitors registered at the Grand View Villa, Banff, from April 1, 1908, to April 1, 1909 :—

Canada.....	1,120
United States....	322
England.....	46
Japan.....	2
India.....	9
Ireland.....	22
China.....	10
Scotland.....	28
Australia.....	13
Switzerland....	1
Ceylon.....	3
Holland.....	4
New Zealand....	11
France.....	3
Total.....	<u>1,594</u>

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SUMMARY.

Banff Springs Hotel....	7,197
Mount Royal Hotel....	1,955
Sanitarium....	8,238
Hotel King Edward....	5,911
Hot Springs Hydropathic....	1,077
Alberta Hotel....	6,664
Grand View Villa....	1,594
Park Hotel....	1,500
Excursionists not registered....	3,684
Cottagers.....	1,960
Total.....	39,780

Number of visitors at the Cave and Basin, from April 1, 1908, to April 1, 1909:—

Canada....	4,105
United States....	3,302
England....	203
Scotland..	93
Ireland....	7
New Zealand....	49
Australia....	25
New South Wales....	7
South Africa..	11
India....	5
Ceylon....	2
China....	11
Japan....	5
France....	7
Germany..	10
Sweden..	8
Holland....	4
Total.....	7,854

Number of visitors at the Upper Hot Springs, from April 1, 1908, to April 1, 1909:—

United States and Canada....	14,032
Newfoundland....	2
England....	151
Scotland....	53
Ireland....	28
Australia....	46
South Africa..	4
India....	2
Hawaiian Islands....	2
Germany..	6
China....	8
Japan....	4
Denmark....	14
Sweden..	2
Total.....	14,355

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Number of visitors registered at the Chalet, Lake Louise, Laggan, from April 1, 1908, to April 1, 1909:—

Canada.....	1,904
United States.....	4,028
England.....	402
Scotland.....	68
Ireland.....	14
Japan.....	2
Russia.....	9
France.....	3
Cuba.....	5
Australia.....	32
India.....	9
Holland.....	16
China.....	4
New Zealand.....	38
Honolulu.....	9
Denmark.....	2
Jamaica.....	1
Germany.....	43
Poland.....	1
South America.....	2
Sweden.....	9
Switzerland.....	12
Africa.....	1
Italy.....	22
Alaska.....	4
Belgium.....	6
South Ancholia.....	1
Hawaii.....	9
Total.....	<u>6,656</u>

List of visitors at the Mount Stephen House, Field, from April 1, 1908, to April 1, 1909:—

United States.....	1,922
Canada.....	2,019
British Isles.....	486
Australia.....	64
New Zealand.....	96
Germany.....	29
India.....	6
Japan.....	1
China.....	14
South America.....	6
France.....	9
Switzerland.....	38
Hungary.....	6
Hawaii.....	9
South Africa.....	6
Holland.....	14
Italy.....	18
Denmark.....	2
Jamaica.....	1
Sweden.....	9
Tasmania.....	9
Belgium.....	6
Total.....	<u>3,770</u>

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MUSEUM.

REPORT OF THE CURATOR.

ROCKY MOUNTAINS PARKS OF CANADA,

BANFF, ALBERTA, July 2, 1909.

HOWARD DOUGLAS, Esq.,
Commissioner of Dominion Parks,
Banff, Alberta.

SIR,—As will be seen by the attached list of visitors for the twelve months there has been a decided increase.

Additions.—Two young cariboo heads and a few birds collected by myself, as well as a number of birds' eggs have been added to the museum; also a collection of sponges, shells, corals, &c., from the Bahama Islands, and garnets from Alaska was donated by Mr. A. C. Talbot, of Calgary. The former, although not in the collecting grounds, are most interesting. Promises of loans and donations are becoming more numerous but do not always materialize.

Work done.—The collection of insects is being rapidly added to, and I have to thank Dr. E. M. Walker, of the Biological Section of Toronto University, for giving much help in naming orthoptera and odonta; Dr. L. O. Howard, the eminent chief of the entomological branch of the Department of Agriculture, Washington, D.C., and his expert assistants for valuable assistance in naming specimens in the orders hymenoptera, diptera, coleoptera, hemiptera, &c.; also the Experimental Farm Entomological Branch for much assistance in naming lepidoptera and other orders.

Suggested improvements.—As soon as at all possible the mammals of the park should be completed and represented in the museum by full sized specimens. Many common animals are not yet on exhibition, and to make the best specimens these should be taken in the fall, winter or early spring.

The mineral collection should be made more complete by additional specimens from the neighbourhood, as also from British Columbia and New Ontario.

Some method of displaying the maps received from the Geological Survey Department would be of advantage as they prove most interesting as well as useful and instructive to many of the visitors.

Any addition to the Indian collection would be money well invested, as the day for procuring these things will soon be past. I may say that nearly all the visitors are very much interested in the display of Indian work now on loan. It might be well to purchase the Reverend Canon Stocken's collection, which I understand he is desirous of selling at a reasonable price.

Many useful and interesting pamphlets are now in my possession relative to museum work, &c., which, to be of more use for the purpose of reference, should be placed in a suitable book case and catalogued.

As usual, I have during the past year named many plants for visitors and also given much other information.

I append the weather report for the past year.

I am, Sir,

Your obedient servant,

N. B. SANSON,

Curator.

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Visitors at the Museum, from April 1, 1908, to April 1, 1909 :—

Canada....	6,450
Yukon Territory....	18
Newfoundland....	2
United States....	2,221
England....	432
Scotland....	197
Ireland....	42
South Wales..	3
Wales....	1
Isle of Man....	1
Channel Islands....	
Australia.....	84
New South Wales....	4
New Zealand....	97
South Africa....	4
Zululand....	1
Orange River Colony....	4
Germany....	47
The Hague..	1
Holland....	16
Belgium....	18
China..	24
Thibet..	1
Italy..	7
India.....	10
France....	19
Norway..	7
Austria....	22
Japan....	19
Sweden..	12
Russia....	7
South America....	4
Switzerland....	28
Denmark....	14
Total....	9,817

METEOROLOGICAL TABLES

ROCKY MOUNTAINS PARK.

MAXIMUM and Minimum Temperatures and the General State of the Weather between July 1, 1908, and June 30, 1909.

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1908.	°	°	
July 1....	77.1	38.2	Fair; very fine day.
" 2....	78.0	39.7	Cloudy; thunder; rain.
" 3....	67.4	44.0	Cloudy; squally wind.
" 4....	58.7	42.8	Cloudy; light rain; river high and muddy; lightning.
" 5....	63.9	37.2	Fair; fine day.
" 6....	71.6	36.3	Fair.
" 7....	77.4	40.0	Fair; very fine day.
" 8....	77.4	43.3	Fair.
" 9....	67.5	60.4	Cloudy; squally wind.
" 10....	77.4	48.8	Fair; perfect day.
" 11....	81.7	43.7	Fair; perfect day; campanula in flower.
" 12....	69.6	44.7	Cloudy; fine day; cirro-stratus and cirrus clouds.
" 13....	68.0	52.8	Cloudy; rain.
" 14....	67.3	52.8	Cloudy; strawberries abundant.
" 15....	75.9	47.2	Fair; perfect day; river very high.
" 16....	71.6	45.2	Cloudy; light rain; lightning; Shepherdia in fruit.
" 17....	76.1	48.8	Fair; light rain; asters in flower; thunder and lightning.
" 18....	76.6	42.2	Fair; fine day.
" 19....	78.1	55.0	Fair.
" 20....	84.4	41.0	Fair; very fine day; many insects.
" 21....	87.5	42.3	Fair; very fine day; forest fire.
" 22....	86.5	44.9	Fair; forest fire; very fine day.
" 23....	73.4	50.0	Cloudy; rain; thunder and lightning; forest fire out.
" 24....	77.5	49.6	Fair.
" 25....	69.2	48.0	Cloudy; rain; fine sunset.
" 26....	65.5	37.6	Fair; very fine day.
" 27....	70.8	33.5	Fair; forest fire.
" 28....	53.8	41.3	Cloudy; rain; thunder and lightning.
" 29....	69.4	35.0	Fair; very fine day.
" 30....	79.0	39.8	Fair; very fine day.
" 31....	84.5	42.9	Fair; very fine day; smoke from forest fire.
Aug. 1....	80.2	43.0	Fair; rain; thunder and lightning.
" 2....	68.0	46.0	Fair; very fine day.
" 3....	69.5	50.6	Cloudy.
" 4....	78.4	44.0	Fair; fine sunset; forest fire still burning.
" 5....	81.2	46.3	Fair; very fine day; large cumulus clouds over fire, &c.; rivers, &c., dropping.
" 6....	78.4	44.8	Fair; brilliant meteor, noise in bursting; very fine day, but dense smoke.
" 7....	76.2	43.3	Fair; light rain.
" 8....	81.1	36.2	Fair; very fine day; fire bad in afternoon.
" 9....	79.4	40.0	Fair; smoke from forest fire about.
" 10....	68.4	43.9	Fair.
" 11....	51.2	43.9	Cloudy; rain; forest fire nearly out.
" 12....	64.2	39.9	Fair; light rain; forest fire up again.
" 13....	66.5	33.1	Fair; fine day.
" 14....	76.1	32.2	Fair; aurora; very fine day.
" 15....	76.4	44.8	Fair; fine day.
" 16....	70.0	47.1	Fair.
" 17....	82.0	36.0	Fair; very fine day.

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MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1908.	°	°	
Aug. 18....	77·0	44·0	Fair ; very fine aurora ; very fine day.
" 19....	84·7	42·0	Fair ; very fine day.
" 20....	73·4	43·5	Fair ; thunder ; much smoke from fire.
" 21....	71·4	43·5	Fair ; very fine day.
" 22....	77·4	37·5	Fair ; very fine day.
" 23....	66·5	38·6	Cloudy ; rain ; thunder and lightning ; forest fire out.
" 24....	62·0	45·6	Cloudy.
" 25....	47·1	37·8	Cloudy ; rain.
" 26....	54·1	38·7	Cloudy ; fine sunset.
" 27....	62·4	32·2	Fair ; light rain.
" 28....	59·3	42·1	Fair.
" 29....	58·3	40·3	Cloudy.
" 30....	55·8	36·0	Cloudy ; rain ; very fine rainbow.
" 31....	62·2	35·4	Fair.
Sept. 1....	66·9	38·2	Fair.
" 2....	62·0	50·2	Cloudy ; rain.
" 3....	63·4	45·7	Fair.
" 4....	69·3	45·8	Fair ; fine sunrise ; very fine day.
" 5....	73·2	46·2	Fair ; aurora ; very fine day.
" 6....	76·7	40·2	Fair ; very fine day.
" 7....	62·9	46·6	Cloudy ; rain ; heavy thunder and vivid lightning.
" 8....	53·1	38·3	Cloudy ; light rain.
" 9....	53·0	40·3	Cloudy ; very squally chinook kind of wind.
" 10....	67·4	49·4	Fair ; very fine day.
" 11....	73·4	36·0	Fair ; very fine day.
" 12....	75·4	34·7	Fair ; very fine day ; brilliant aurora.
" 13....	75·4	37·9	Fair ; very fine day and night ; sheet lightning.
" 14....	70·0	44·0	Fair ; light rain ; fine sunrise.
" 15....	55·8	40·7	Cloudy ; rain.
" 16....	43·8	42·6	Cloudy ; rain.
" 17....	62·5	39·9	Fair ; few butterflies still about ; very fine afternoon.
" 18....	54·3	35·9	Cloudy ; heavy dewfall.
" 19....	61·5	44·0	Fair ; heavy dewfall.
" 20....	65·4	53·3	Fair ; very fine day and night.
" 21....	64·2	45·7	Fair ; fine sunrise ; squally wind.
" 22....	50·7	37·3	Fair ; fine day ; squally wind.
" 23....	42·8	27·3	Cloudy ; rain and snow ; geese flying over town.
" 24....	32·3	27·0	Cloudy ; light snow ; snow on mountains.
" 25....	40·3	18·0	Fair ; cool but fine day.
" 26....	41·4	18·0	Cloudy ; fine sunrise.
" 27....	54·0	33·9	Cloudy.
" 28....	55·4	29·8	Cloudy.
" 29....	58·4	38·5	Cloudy ; squally chinook kind of wind ; ducks flying east ; fine sunset.
" 30....	64·6	29·8	Fair ; very fine day ; fine sunrise and sunset ; vanessa antiopa butterflies.
Oct. 1....	53·9	38·2	Cloudy ; heavy rain ; fine sunrise.
" 2....	38·0	34·3	Cloudy.
" 3....	53·3	26·9	Fair ; very fine day ; aurora ; few insects about.
" 4....	57·4	24·0	Fair ; light rain ; few moths and other insects.
" 5....	50·4	38·8	Cloudy.
" 6....	52·9	29·0	Fair ; fine day.
" 7....	60·2	33·9	Fair ; very fine day.
" 8....	64·6	33·1	Fair ; very fine day and night.
" 9....	49·3	36·6	Cloudy ; trees becoming leafless
" 10....	61·0	35·2	Fair ; very fine day.
" 11....	59·4	25·3	Fair ; very fine day.
" 12....	59·0	26·8	Cloudy ; fine day.
" 13....	47·3	37·9	Cloudy ; rain.
" 14....	36·2	32·0	Cloudy ; snow ; patches of snow on ground.
" 15....	39·3	23·6	Cloudy ; patches of snow on ground.
" 16....	37·6	24·6	Cloudy.
" 17....	39·1	18·2	Fair.
" 18....	40·9	24·2	Cloudy ; fine sunrise ; few birds still about.

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MAXIMUM and Minimum Temperatures, &c.—Continued.

Date.	THERMOMETER READINGS.		WEATHER.
	Maximum for day.	Minimum for day.	
1908.	°	°	
Oct. 19...	34·7	30·1	Cloudy; snow; about 5·25 in. of snow on ground; few sleighs out; grosbeaks.
" 20....	34·1	25·9	Cloudy; longspurs on way south.
" 21....	34·2	21·7	Fair; fine day.
" 22....	34·1	14·9	Cloudy.
" 23....	41·9	17·4	Fair; skating on ponds; no sleighing.
" 24....	42·9	31·7	Fair.
" 25....	44·7	22·3	Fair; fine sunrise; fine day; redpolls.
" 26....	52·2	27·2	Fair; chinooking.
" 27....	30·3	24·9	Cloudy.
" 28....	14·3	9·8	Cloudy; snow; very stormy all day; sleighing but bad; duck flying south.
" 29....	21·1	6·5	Cloudy; Bow river frozen over in places; sleighing but bad.
" 30....	46·3	16·0	Cloudy; no sleighing.
" 31....	43·3	35·8	Fair; aurora; fine day.
Nov. 1....	48·2	24·7	Fair.
" 2....	49·1	38·2	Fair; rain.
" 3....	55·1	42·7	Cloudy; very light rain; very squally; dry warm wind.
" 4....	58·4	49·7	Fair; very squally wind; fine warm day.
" 5....	54·2	46·8	Fair; squally wind all day and night; fine and warm.
" 6....	51·2	41·7	Fair; very squally wind; fine and warm.
" 7....	49·7	41·3	Fair; squally wind; fine and warm day; aurora.
" 8....	34·3	20·8	Fair; very fine day.
" 9....	28·8	17·7	Fair.
" 10...	21·5	7·6	Fair; heavy hoar frost; river frozen over above boat house.
" 11....	20·0	—1·7	Fair; river frozen over; about 5 inches thick.
" 12....	20·0	—3·4	Fair.
" 13....	32·4	10·1	Fair.
" 14....	31·2	7·0	Fair.
" 15....	33·8	13·1	Fair; very squally wind late afternoon and through midnight.
" 16....	39·2	26·2	Cloudy; very light rain; thaw; very squally wind; river ice becoming unsafe.
" 17....	39·9	32·7	Cloudy; rain; large flock snowbirds.
" 18....	43·6	33·5	Cloudy; light rain and snow; very squally wind; river open in places.
" 19....	42·4	32·7	Cloudy; squally wind.
" 20....	42·0	34·3	Cloudy; rain with snow at night.
" 21....	36·4	31·4	Cloudy; brilliant meteor.
" 22....	36·3	28·7	Fair.
" 23....	34·2	23·8	Cloudy; fine sunset.
" 24....	32·3	23·3	Cloudy.
" 25....	28·6	21·2	Cloudy.
" 26....	26·0	12·8	Fair; fine day.
" 27....	28·2	13·8	Fair; Bow river partly frozen over.
" 28....	34·8	25·0	Cloudy; fine sunrise; squally wind.
" 29....	31·2	7·0	Cloudy; light snow.
" 30....	5·2	—7·8	Fair; Bow river all frozen over; good skating.
Dec. 1....	8·3	—14·0	Fair; heavy hoar frost; only about $\frac{1}{2}$ inch snow on ground.
" 2....	15·0	—1·1	Fair; fine sunset; squally wind.
" 3....	17·3	0·3	Fair; fine sunset; very fine day.
" 4....	25·0	7·8	Cloudy; mostly patches of snow on ground.
" 5....	30·7	18·9	Cloudy; fine sunset.
" 6....	25·8	9·3	Fair; very fine day.
" 7....	27·2	15·5	Fair.
" 8....	27·2	8·7	Cloudy.
" 9....	30·3	24·0	Fair; light snow.
" 10...	24·0	2·0	Fair; fine day.
" 11....	30·6	18·7	Cloudy; very squally wind; light snow.
" 12....	34·3	25·8	Cloudy; squally wind; snow.
" 13....	31·2	26·6	Cloudy; squally wind; about 6 inches snow on ground; sleighing but bad.
" 14...	25·2	15·0	Fair; fine day.
" 15....	20·0	2·9	Fair; fine day.
" 16....	10·1	—9·2	Fair; fine day.

SESSIONAL PAPER No. 25

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		WEATHER.
	Maximum for day.	Minimum for day.	
1908.	°	°	
Dec. 17....	20·8	—12·0	Fair; fine day; very fine sunrise and sunset.
" 18....	23·2	11·7	Fair; squally cold wind; very fine sunset; waxwings and grosbeaks.
" 19....	25·0	11·1	Cloudy; very squally wind.
" 20....	19·3	11·8	Fair; squally wind.
" 21....	21·2	8·3	Fair; very fine sunrise and sunset; squally wind.
" 22....	22·2	8·7	Cloudy.
" 23....	26·8	12·7	Fair.
" 24....	25·0	19·4	Cloudy; squally wind; fine sunrise.
" 25....	32·0	19·7	Cloudy; snow; about 13 inches snow on ground.
" 26....	28·3	21·2	Cloudy; sleighing good.
" 27....	31·0	24·2	Cloudy.
" 28....	33·1	23·6	Cloudy; snow.
" 29 ...	13·3	—0·8	Fair; fine day; loud reports of frost through midnight; mostly calm all day.
" 30....	—11·4	—27·6	Fair; Lake Minnewanka frozen over; calm all day.
" 31....	—8·8	—33·8	Fair; mostly calm all day.
1909.			
Jan. 1....	12·1	—16·8	Fair; very squally wind; snow drifting.
" 2....	17·2	8·0	Cloudy; snow; squally wind; snow drifting.
" 3....	1·9	—10·2	Cloudy; heavy snow; very gusty wind; snow drifting much.
" 4....	—16·6	—20·4	Cloudy; squally wind; about 20 inches of snow on ground.
" 5....	—18·6	—46·0	Fair; fine sunset; mist from river obscuring near objects
" 6....	—15·6	—27·8	Cloudy; squally cold wind.
" 7....	—30·0	—45·0	Fair; mostly calm all day; light snow; much mist rising from river.
" 8 ..	—25·0	—47·0	Fair; mountains veiled in mist 5 p. m.
" 9....	—21·2	—35·9	Fair; parhelia.
" 10....	—22·4	—44·9	Fair; very bright clear day and calm.
" 11....	—6·0	—29·8	Fair.
" 12....	—4·0	—12·9	Cloudy; squally wind.
" 13....	—10·7	—24·2	Cloudy; squally wind.
" 14....	—12·4	—26·7	Fair; mostly calm all day.
" 15....	18·0	—1·5	Cloudy; snow; squally wind.
" 16....	34·2	24·8	Cloudy; squally wind; ice on river about 19 inches.
" 17....	31·0	22·7	Cloudy; snow.
" 18....	29·8	24·7	Cloudy; light snow.
" 19....	30·0	21·3	Cloudy; snow; snow changing to rain about 10 p.m.
" 20....	31·1	23·7	Fair.
" 21....	28·1	14·3	Cloudy; snow.
" 22....	23·7	2·6	Cloudy; snow; about 20 inches of snow on ground.
" 23....	19·9	—8·2	Cloudy; snow-flurries.
" 24....	23·9	9·4	Cloudy.
" 25....	27·0	13·2	Cloudy; light snow; ice cutting on Bow river.
" 26....	28·3	21·0	Cloudy; chinooking; ice on Bow river 26 inches.
" 27....	33·2	17·6	Cloudy; snow; a gale.
" 28....	9·3	—13·4	Fair; about 22 inches of snow on ground.
" 29....	14·9	—21·4	Fair; loud reports from frost early morning; squally wind.
" 30....	26·7	8·0	Fair; squally wind; fine mild day.
" 31....	33·0	19·4	Cloudy.
Feb. 1....	36·2	20·8	Cloudy; light rain and snow; thaw.
" 2....	38·7	25·8	Cloudy.
" 3....	39·0	32·3	Cloudy; thaw; very light rain; very heavy snow-storm 10 p.m.
" 4....	28·3	14·3	Cloudy; light snow.
" 5....	26·3	7·3	Fair.
" 6....	8·4	—0·8	Cloudy; squally wind; snow drifting.
" 7....	—9·8	—14·5	Cloudy; very squally, cold wind; light snow; loud reports frost upheaving.
" 8....	0·3	—32·1	Fair; fine sunset.
" 9....	21·4	—14·3	Fair; fine day.
" 10....	7·0	—6·9	Cloudy; light snow; very squally wind afternoon and through midnight.
" 11....	—14·8	—20·2	Cloudy; snow; very squally wind; stormy.
" 12....	—4·9	—33·7	Fair; calm all day; comparatively warm in sun.

9-10 EDWARD VII., A. 1910

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1909.	°	°	
Feb. 13....	— 3·3	—38·0	Fair; mostly calm; fine sunset.
" 14....	19·3	—25·3	Cloudy; squally wind.
" 15....	29·0	16·3	Cloudy; snow flurries.
" 16....	34·1	23·1	Cloudy; light snow.
" 17....	37·3	28·2	Cloudy; fine sunset; squally wind.
" 18....	37·3	26·8	Cloudy; ice on Bow river 29 inches thick.
" 19....	32·2	20·6	Cloudy.
" 20....	29·8	9·8	Fair; ice on Lake Minnewanka 23 inches; fine sunrise.
" 21....	29·1	— 5·3	Fair; very fine day; mostly calm all day.
" 22....	25·0	5·8	Fair; snow in woods about 23 inches deep.
" 23....	28·7	9·5	Cloudy; squally wind.
" 24....	35·5	22·1	Cloudy; thaw; light snow evening.
" 25....	38·0	28·0	Fair; thaw.
" 26....	34·2	27·3	Cloudy; squally wind.
" 27....	34·3	24·3	Cloudy.
" 28....	30·1	18·9	Cloudy; light snow.
Mar. 1....	32·4	14·0	Cloudy.
" 2....	32·2	24·6	Fair; very squally wind.
" 3....	43·7	17·9	Fair; thaw.
" 4....	41·2	24·6	Cloudy; light snow; fine sunset.
" 5....	30·4	11·2	Fair.
" 6....	31·4	— 5·9	Fair; very fine day; mostly calm all day.
" 7....	32·0	— 4·0	Fair.
" 8....	34·8	18·5	Fair; snow.
" 9....	33·2	10·3	Fair; light snow.
" 10....	26·2	— 4·9	Fair; mostly calm day.
" 11....	37·2	11·2	Cloudy.
" 12....	29·6	24·0	Cloudy; snow.
" 13....	44·0	12·3	Fair; thaw; 20 inches of snow on ground.
" 14....	41·0	30·2	Cloudy; mostly calm all day; thaw.
" 15....	46·0	13·8	Fair; fine day; fine sunset; thaw.
" 16....	47·2	20·0	Fair; thaw.
" 17....	34·2	27·8	Cloudy; light snow; small flies appearing.
" 18....	34·8	13·0	Fair.
" 19....	37·0	21·7	Cloudy; red winged blackbird; crow.
" 20....	32·7	12·3	Fair; light snow; mostly calm all day; aurora.
" 21....	33·2	11·2	Cloudy; sleighing becoming bad; some wheels in use.
" 22....	36·9	7·3	Cloudy; aurora; fine sunset.
" 23....	45·8	10·8	Fair; very fine day; sleighing bad; thaw.
" 24....	47·0	16·4	Fair; very fine day; thaw.
" 25....	42·2	32·3	Fair; very gusty wind; chinooking; robin.
" 26....	38·6	10·6	Cloudy.
" 27....	42·2	26·8	Cloudy; mostly calm all day; light rain and snow.
" 28....	29·0	19·0	Cloudy.
" 29....	39·2	8·4	Fair.
" 30....	44·3	26·1	Fair.
" 31....	45·2	35·4	Cloudy; Bow river open in places.
April 1....	36·3	18·3	Cloudy; light snow.
" 2....	35·2	15·7	Fair; snow flurries; fine sunrise.
" 3....	33·8	12·2	Fair; snow flurries; aurora.
" 4....	33·0	6·6	Fair; very fine sunrise; mountain bluebirds.
" 5....	34·8	15·9	Cloudy; light snow; juncos.
" 6....	33·2	9·3	Fair; thaw.
" 7....	42·6	5·9	Fair; fine day; sleighing on sheltered roads; fine sunset.
" 8....	47·3	21·3	Fair; fine sunrise.
" 9....	48·3	30·2	Cloudy; light snow; river rising.
" 10....	38·2	28·1	Fair.
" 11....	35·6	18·5	Cloudy; wild geese about.
" 12....	30·4	14·8	Cloudy; Bow river mostly open; light snow.
" 13....	33·6	19·8	Cloudy; snow flurries; golden-eye duck.
" 14....	36·3	12·9	Cloudy; snow.
" 15....	39·1	25·4	Cloudy; snow; thaw.
" 16....	33·0	25·2	Cloudy; light snow; no sleighing
" 17....	36·3	13·0	Fair; fine day but cold wind; hawks.

SESSIONAL PAPER No. 25

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1909.	°	°	
April 18....	43·6	11·8	Fair ; Bow river open.
" 19....	41·0	14·9	Cloudy ; light snow.
" 20....	33·0	19·0	Cloudy ; anemone, patens variety, in flower ; snow flurries.
" 21....	42·3	18·8	Cloudy ; juncos.
" 22....	44·2	18·6	Cloudy ; snow flurries ; robins numerous.
" 23....	41·3	21·2	Cloudy.
" 24....	55·2	33·8	Cloudy.
" 25....	45·1	34·0	Cloudy ; light snow ; sharpshined hawks.
" 26....	42·2	22·9	Cloudy.
" 27....	39·0	25·9	Cloudy ; light snow.
" 28....	27·4	24·8	Cloudy ; light snow ; gusty wind morning ; horned larks.
" 29....	33·9	13·9	Fair ; snow mostly in patches.
" 30....	41·3	13·0	Cloudy ; grebe.
May 1....	52·8	28·7	Fair ; fine afternoon ; thaw ; petasites partly in flower.
" 2....	61·5	29·3	Cloudy ; very fine and warm wind ; ants out ; vanessa milberti.
" 3....	64·5	32·5	Cloudy ; very fine and warm wind ; strong wind ; frogs piping.
" 4....	52·3	35·1	Cloudy ; rain ; squally wind ; belted kingfisher ; catkins on aspen poplars.
" 5....	41·1	21·9	Cloudy ; squally wind.
" 6....	43·0	30·7	Cloudy ; gull.
" 7....	49·3	20·4	Fair ; fine day.
" 8....	52·1	21·8	Fair ; American merganser ; swallow.
" 9....	57·3	22·9	Fair ; ruby crowned kinglet ; yellow throat warbler ; Brewer's blackbird.
" 10....	54·4	34·9	Cloudy ; light rain ; white crowned sparrows ; chipping sparrows ; osprey, nuthatch, sparrow hawk, grouse drumming ; grass green ; anemones plentiful ; shepherdia Canadensis in flower ; swallows, bees, water insects, midges, mosquitoes, ground bees ; vanessa antiopa ; Audubon's warbler.
" 11....	39·1	33·7	Cloudy ; light rain and snow.
" 12....	59·2	29·9	Fair ; fine day.
" 13....	42·2	32·2	Cloudy ; snow and light rain ; bright aurora.
" 14....	52·4	23·3	Fair ; heavy hoar frost.
" 15....	39·1	30·8	Cloudy ; snow ; Swainson's leucosticte.
" 16....	36·2	28·2	Cloudy ; squally wind ; yellow throat warbler.
" 17....	42·2	28·1	Cloudy ; light rain and snow ; song sparrow.
" 18....	53·9	30·8	Cloudy ; mostly calm all day ; aurora.
" 19....	57·8	26·0	Fair ; aurora.
" 20....	52·7	31·5	Cloudy ; light rain ; mostly calm.
" 21....	48·1	30·4	Cloudy ; rain ; olive backed thrush ; Calypso-borealis.
" 22....	48·2	37·9	Cloudy ; Arctostaphylos Uva-Ursi in flower.
" 23....	52·1	37·8	Cloudy ; rain ; primula mistassinica in flower.
" 24....	63·5	38·7	Cloudy ; light rain ; aurora ; lycæna butterfly.
" 25....	63·5	37·0	Fair ; rain ; thlaspi Orvense in flower ; river rising.
" 26....	59·6	34·6	Cloudy ; river rising ; robins building ; fly catchers.
" 27....	57·9	35·3	Cloudy ; rain ; fine afternoon.
" 28....	61·8	39·9	Cloudy ; anemone parviflora ; dodocatheon meadia ; viola fragaria glauca in flower ; adunea.
" 29....	56·4	38·9	Cloudy ; light rain.
" 30....	61·0	37·2	Fair ; very squally wind.
" 31....	67·1	48·9	Cloudy ; viola Canadensis ; aspens in young leaf.
June 1....	75·5	34·9	Fair ; thunder ; thaspium cordata.
" 2....	62·8	47·2	Fair ; rain ; Bow river very muddy and high.
" 3....	60·4	38·9	Fair ; astragalus alpina.
" 4....	55·7	38·7	Cloudy ; rain ; commandra livida.
" 5....	47·0	36·8	Cloudy ; rain ; chickweeds in flower.
" 6....	51·1	36·4	Cloudy ; light rain.
" 7....	57·0	32·9	Cloudy ; Lake Minnewanka open.
" 8....	66·5	28·9	Fair ; wasps ; cow birds ; corralhoriza innata.
" 9....	71·0	31·1	Fair ; heavy dewfall ; very fine day and night.
" 10....	75·1	34·8	Fair ; very fine day and night ; several plants out.
" 11....	75·5	34·5	Fair ; very fine day and night.
" 12....	71·8	36·9	Fair ; light rain.
" 13....	61·4	43·3	Cloudy ; rain.

9-10 EDWARD VII., A. 1910

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		Weather.
	Maximum for day.	Minimum for day.	
1909.	°	°	
June 14....	72·9	32·7	Fair ; heavy dewfall ; very fine day.
" 15....	76·3	38·4	Fair ; lycæna butterflies numerous ; aspen poplars in good leaf.
" 16....	69·0	48·9	Cloudy ; light rain ; fine day ; clematis.
" 17....	66·9	43·5	Cloudy ; wood anemones out.
" 18....	70·0	48·3	Fair ; fine day.
" 19....	69·1	40·2	Fair ; yellow columbine ; fine sunset.
" 20....	63·2	46·8	Cloudy ; rain.
" 21....	65·9	38·2	Cloudy ; rain.
" 22....	62·4	40·2	Cloudy.
" 23....	60·4	43·8	Cloudy.
" 24....	54·1	41·0	Cloudy ; rain.
" 25....	59·2	33·9	Cloudy ; rain.
" 26....	61·4	31·7	Cloudy ; river about clear again.
" 27....	66·3	40·9	Fair ; fine day.
" 28....	66·0	35·2	Fair ; fine day.
" 29....	66·2	38·8	Cloudy ; rain ; thunder.
" 30....	79·4	47·4	Fair ; very fine day and night ; many beetles.

N. B. SANSON,
Meteorological Agent.

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DEPARTMENT OF THE INTERIOR
DOMINION OF CANADA.

Government
Publications

Annual REPORT

COMMISSIONER OF DOMINION PARKS

FOR THE
YEAR ENDING MARCH 31

1911

1910/11

PART V., ANNUAL REPORT, 1911

OTTAWA
GOVERNMENT PRINTING BUREAU
1912



Consolation Valley, Rocky Mountains Park.

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DOMINION PARKS

DOMINION PARKS

No. 1.

REPORT OF THE COMMISSIONER OF DOMINION PARKS.

OFFICE OF THE COMMISSIONER OF DOMINION PARKS,

EDMONTON, ALBERTA, April 1, 1911.

The Honourable FRANK OLIVER,

Minister of the Interior,

Ottawa, Ont.

SIR,—I have the honour to submit herewith my third annual report as Commissioner of Dominion Parks for the year ending March 31, 1911.

For convenience I have arranged the report under the following heads:—

1. Report of the Commissioner of Dominion Parks.
2. Report of the Superintendent of the Rocky Mountains Park.
- 2A. Report of the Curator of the Banff Museum.
- 2B. Analysis of Nationalities of visitors to Banff Springs and Hotels.
3. Report of the Superintendent of Yoho and Glacier Parks.
4. Report of the Superintendent of Jasper Park.
5. Report of the Superintendent of Buffalo Park.
6. Report of the Superintendent of Elk Island Park.
7. Report of the Superintendent of Waterton Lakes Park.

In presenting my report for the year ending March 31, 1911, I have attached reports from the superintendents of the different parks in control of this branch of the Department of the Interior. These reports give in detail an account of the work carried on in, and the operation of the parks under their charge.

In the month of June, 1910, the office of the Commissioner of Dominion Parks was moved from Banff to Edmonton in order that the commissioner might be in closer touch with the organization of the new park in the Jasper Pass, and the Buffalo and Elk Island parks. I had, up to that time, been acting as superintendent of the Rocky mountains park at Banff, and my removal to Edmonton necessitated the appointment of a new superintendent for the Rocky Mountains Park. Accordingly, Mr. A. B. Macdonald was appointed to the position, and took charge in June, 1910.

I had previously arranged an outline of the work to be done in the Rocky mountains park during the year, so, as will be seen by his report, a large part of his duties outside of the routine work of the superintendent's office, was the completion of the work already arranged for.

REVENUE OF PARK.

It will be noticed that the revenue of the Rocky Mountains Park continues to show a steady and satisfactory increase over that of former years. For the year just ended the revenue of the park from all sources was fully 35 per cent over that of the previous year, and almost equalled the amount voted by parliament for the

maintenance of that park. The revenue is derived from baths, sulphur water rates, ground rents, coal royalties, timber dues, livery and other licenses and permits; also a few other minor sources, and it is pleasing to note that every department shows an increase.

GAME AND FIRE PROTECTION.

Since the inauguration, in 1909, of a system of game and fire protection, by the appointment of permanent game and fire wardens, whose duty it is to patrol the park, the game in the park has greatly increased and the animals are coming closer to the village of Banff and the paths of the tourists, and are less timid. As a matter of fact it is no uncommon occurrence to see deer on the lawns of the residences of Banff. A band of eighteen mountain sheep wintered last year within one half mile of the Canadian Pacific railway station at Banff. This has been largely due to the exclusion of dogs from the park and the enforcement of the regulation prohibiting the carrying of any, but sealed, fire-arms within the confines of the park. The fact that these game wardens are constantly patrolling the park has resulted in the almost total abolition of the poaching, and only one or two instances of this were brought to the attention of the park superintendent during the year. A conviction was secured in one case, and a heavy penalty imposed, which will have the effect of preventing a recurrence of the offence.

In my opinion a strict enforcement of the regulations will result in a very rapid increase in the numbers of game, and thus an additional attraction will be furnished for tourists visiting this favourite resort.

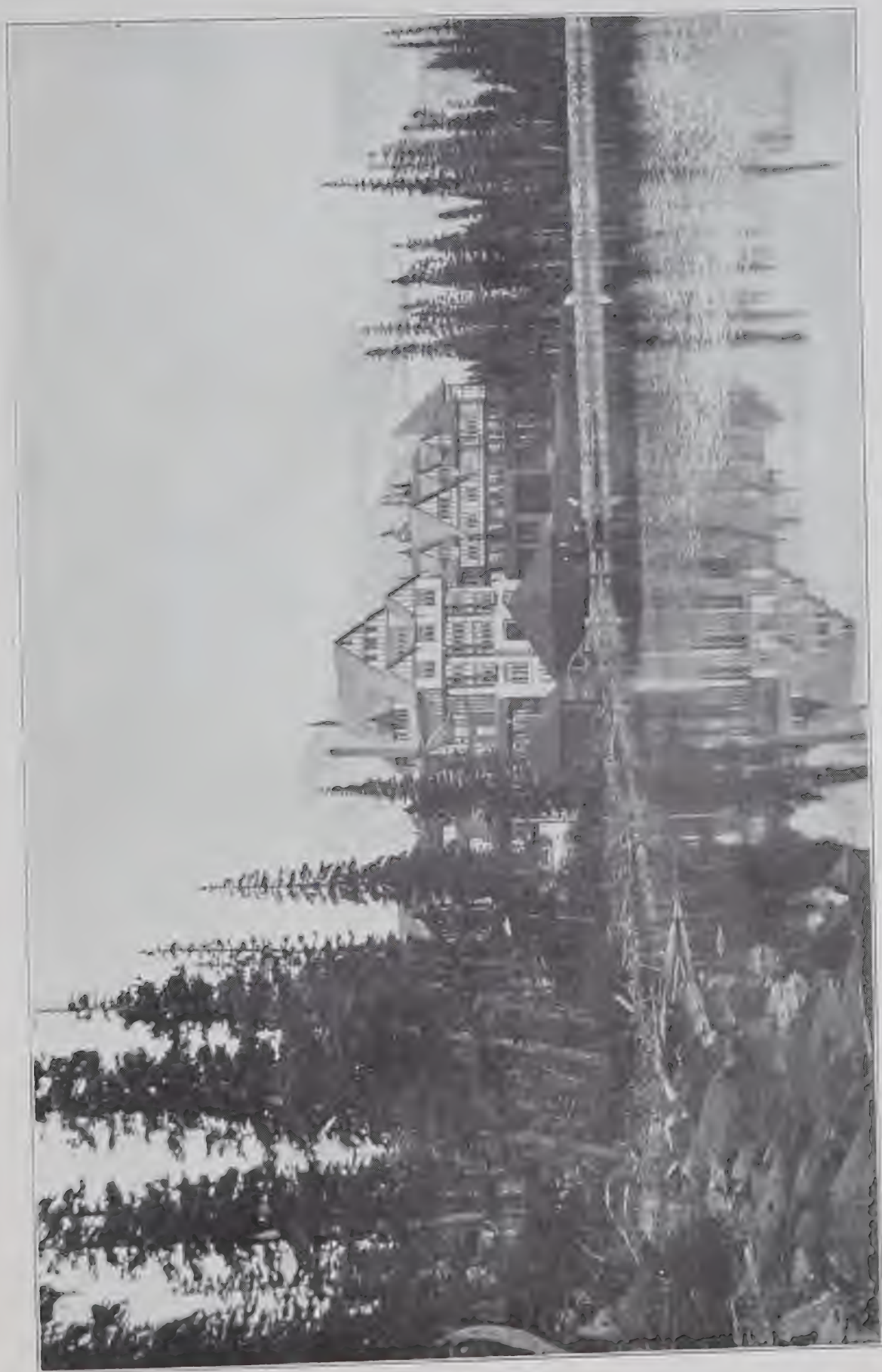
There is no doubt that the patrolling daily of the park by the fire guardians, and the enforcement of the regulations regarding camping parties, has been largely responsible for the small amount of damage by fire reported, and is sufficient proof of the wisdom of having permanent men on the ground. In many cases, when out on patrol, they have been able to discover and extinguish small fires before they had made much headway, and have thus been enabled to preserve much of the natural beauty of the park. These small fires were, in most cases, caused by the thoughtlessness of smokers, but in such an extended area, where there are so many such persons, it is almost impossible to fix the responsibility in every case.

The above remarks will also apply to the Yoho and Glacier parks, where the conditions are almost similar. These parks are, year by year, becoming more favourite resorts for tourists as their natural beauty and charm become better known. The revenue from these parks also shows a very satisfactory increase.

PERMANENT IMPROVEMENTS.

As will be seen by the reports of the superintendents of these parks, a more than usual amount of work was done during the year in the parks along the main line of the Canadian Pacific railway. Perhaps the most important work was the completion of that part of the coach road within the Rocky Mountains Park connecting Banff with the city of Calgary. Three new bridges were built on this road, which is now in a passable condition. It is understood that the Alberta government intends, during the summer, to expend a considerable amount of money on the road east of the park, so as to make it possible to travel by automobile from Calgary to Banff. This should attract a greatly increased number of visitors from that city.

It is also intended to extend this year the coach road to Castle mountain and Laggan, an appropriation for which has been made by parliament. This road will greatly increase the efficiency of the fire patrol system. Running as it does along the north of and parallel to the main line of the Canadian Pacific railway, it furnishes a fire-break on that side of the railway; and with the Bow river on the



Chalet, Lake Louise, Rocky Mountains Park.

south side, the railway will be practically fire-guarded on both sides through the park. From Castle mountain the road can be extended some eight or nine miles to the limits of the park at Vermilion Pass, to connect with the road now under construction by the British Columbia government, from that pass, through the Windermere valley, to Fort Steele and Cranbrook. Tourists to the Rocky Mountains Park would thus have easy access to the beautiful Columbia valley, which would provide an additional attraction for them.

In the Yoho Park, as will be seen by the report of Mr. Hunter, a considerable amount of work was done in the townsite of Field in opening up and grading new streets and in moving a number of buildings erected by squatters on the streets before this area was taken into the park limits. The townsite lots were placed on the market during the year, and a considerable number of them have been leased for a term of forty-two years, under the usual parks regulations. In future a considerable revenue will be derived from this park.

In addition to this about four miles of entirely new road was constructed, including the extension of the road up the valley of the Yoho river to the beautiful Takakkaw falls, which excite the wonder of every visitor, and will prove one of the great future attractions of the park. In addition there was built a new road about one mile in length from the Emerald lake road to the natural bridge over the Kicking Horse, giving access to a very beautiful piece of scenery.

A considerable amount of work on the trails in Glacier Park was done during the year, as shown by the report of the superintendent, and a number of new trails were opened to different beauty spots in the park.

One of the heaviest items of expenditure on work of road building during the coming season will be the construction and extension of the coach road from Banff to Laggan. It is hoped that from fifteen to twenty miles of entirely new road will be completed this year. This will be the chief feature of the work in the Rocky Mountains Park during the year, the other work being merely some small road and trail connections in the vicinity of Banff. We have also called for tenders for the construction of over fifty miles of trail in the vicinity of Banff, which will not only be a great convenience to tourists, but will be of immense value in perfecting the patrol system of the park in permitting the fire and game guardians to reach the outlying portions more quickly and easily.

ANIMALS IN CONFINEMENT.

The report of the superintendent of the Rocky Mountains Park shows that the animals in confinement in the paddocks and at the museum have done unusually well, and the collection has been increased, not only by natural increase, but by the addition of new specimens.

This feature of the attractions at the park is one of the most popular ones. This is evidenced by the large number of people who visit the paddocks and the museum, and spend hours at a time watching and studying the habits and actions of the different animals.

INCREASED NUMBER OF VISITORS.

During the year 63,494 visitors registered at the hotels and summer cottages in Banff, an increase of 7,042 over the previous year, and more than double the number registered in the year 1907. These represented, so far as ascertained, twenty-six different nationalities.

I have before me the annual report of the superintendent of the Yellowstone Park in the United States for 1910, which gives the total number of visitors to that



Photo by Howard Chapman.
Annual camp of Alpine Club of Canada, 1910, in Consolation Valley, Rocky Mountains Park.

resort as 19,575 for the year. From this it will be seen that more than three times as many people visit Canada's national park as visit the favourite tourist resort of the United States.

Judging from the increasing number of visitors year by year, it is reasonable to expect that there will be a still further increase in future years, and that additional accommodation, in the way of baths, &c., is an absolute necessity if the park is to retain its present popularity as the favourite resort of the continent.

The value of this large tourist traffic, as an asset of the Dominion of Canada, in direct revenue, may be judged from the following extract from the report of Commissioner Whipple of the Adirondack parks in New York state:—

'The Commission's report shows that Adirondack hotels in Clinton county accommodate 3,153 persons; Essex, 7,719; Franklin, 4,626; Fulton, 410; Hamilton, 2,395; Harkimer, 2,415; Lewis, 510; Oneida, 150; St. Lawrence, 1,223; Warren, 3,060; or a total of 28,502 persons. The above figures do not include the private camps and sanitariums. The average length of time spent in the Adirondacks by each visitor is about two weeks; hence it is figured that in those days about 200,000 people sought recreation and health in that region. This estimate was proved to be about right by the reports of the railroads—the Central and the Delaware & Hudson—which showed that 225,000 passengers were carried during the summer season.

'It was estimated that more than \$7,000,000 were invested in hotels and boarding houses, and about \$4,000,000 in private camps and cottages. The total wages paid to 18,307 guides, clerks, servants, cooks, &c., were \$991,550; cash paid for board, carriages, boats, &c., amounted to \$5,213,210; for railroad fares, \$875,000. Thus more than seven millions were spent by summer resorters. This business is largely dependent upon standing forests. The water-power, developed and undeveloped, of much greater value, also depends upon the forest. Present lumbering methods are the great power which works toward the ruin of these two great industries.'

It is a well known fact that the natural attractions of the Adirondack Parks do not compare with those of Canada's National Parks, and there is no doubt that in a very few years the number of tourists to these parks will be greater than that to the Adirondacks, and that their stay will be of longer duration.

ALPINE CLUB OF CANADA.

The Alpine Club of Canada continues to attract widespread attention to the Canadian mountain ranges. The Club House at Banff was open, as usual, all the season and an appreciable part of the secretary's time was daily taken up in giving information to strangers from all parts of the world.

The annual camp was held this year in Consolation Valley, near the lower lake. In spite of the long distance from the railway a large attendance was registered. A synopsis by provinces, states, and countries is here given.

FROM CANADA.

British Columbia—Chilliwack, Cranbrook, Field, Golden, Keremeos, Vancouver, Victoria.

Alberta—Banff, Brant, Calgary, Carbon, Cowley, Coleman, Crossfield, Leduc, Lethbridge, Okotoks, Pincher Creek, Red Deer.

Saskatchewan—Moosejaw, Regina, Saskatoon.

Manitoba—Lillyfield, Winnipeg.

Ontario—Peterborough, Pinkerton, Port Hope, Toronto, Walkerton, Woodstock.

Quebec—Montreal, South Durham.

FROM THE UNITED STATES OF AMERICA.

Illinois—Chicago, Galesburg.
Massachusetts—Boston, West Newton.
Michigan—Saginaw.
Minnesota—Minneapolis, St. Paul.
Missouri—St. Louis.
New Hampshire—Antrim.
New York—Brooklyn, New York.
Oregon—Portland.
Pennsylvania—Bryn Mawr, Philadelphia.
District of Columbia—Washington.

FROM OVERSEAS.

England—Buckhurst Hill, Croydon, London, Stoke-upon-Trent, Wimbledon.
Austria—Vienna.
Italy—Florence.
Sicily—Rizzola.
Switzerland—Interlaken.

The following mountaineering clubs were represented:—

The Alpine Club (England), The American Alpine Club, The German-Austrian Alpine Club, The Italian Alpine Club, The Swiss Alpine Club, The Appalachian Mountain Club, The Fell and Rock Climbing Club.

Members of the following learned societies were present:—The Royal Society, The Royal Geographical Society, The Royal Meteorological Society, The Royal Society of Medicine, The Zoological Society.

Thirty-three members graduated to full membership upon Mountains Bident, Fay, Temple, Stephen and Eiffel Peak. Among important climbs made were the first ascents of mountains Douglas, Babel, Quadra and Chimney Peak, the last being a hitherto unnamed peak to the south of Mount Fay, on the ridge between Prospectors valley and Boom lake. Assiniboine was ascended by a new route as well as by the usual one. Hungabee was also climbed. The two distinguished English mountaineers, Professor Norman Collie and A. L. Mumm, were again unsuccessful in their attempt upon Mount Robson, perhaps the most ill-conditioned as well as the highest peak of all the Rockies. In the Selkirks further explorations were made, and in recognition of their good work two members, S. H. Baker and Howard Palmer, were admitted to the fellowship of the Royal Geographical Society.

A small camp was also stationed in the upper Yoho Valley from which much good climbing was done.

Immediately after the annual camp the Club organized a small expedition for the purpose of showing some of the less known and greatest beauties of the Canadian Alps to Dr. Longstaff, the Himalayan explorer, and his sister. A week was spent in a journey to the head of the Bow Valley, across the mountains to the Yoho Glacier, returning by the incomparable Yoho Valley. Several mountains were climbed and some idea gained of the vast possibilities of the country from the point of view of an experienced mountaineer.

The club continues to grow and appeals yearly to a wider and more distinguished circle. A few years ago the Canadian Pacific Railway Company had much difficulty in finding work for their Swiss guides. During the past years it was impossible for mountaineers to obtain the services of any of them without long previous arrangements.

TOWN OF BANFF.

The town of Banff continues to increase in size and in the number of permanent residents. During the year a considerable number of cottages of a much superior class were erected. These are occupied principally by families from the four western provinces during the summer months. During the past couple of years I have noticed a marked increase in the number of people who come to Banff during the winter for their health and to get away from the bleak winds of the prairie, to spend the winter among the pines.

Among the improvements made may be noted the improvements of the Banff Springs Hotel by the Canadian Pacific Railway Company costing \$125,000. These consist of additions and changes to make the hotel more suitable for the accommodation of the large number of guests. It is also understood that improvements will be made to provide for winter as well as summer tourists and that it is the intention of the Company to keep the hotel open the whole year round.

The Canadian Pacific Railway Company has also completed, during the year, a splendid new station 600 ft. in length for the accommodation of the travelling public, also a fine new station at Laggan. The company has also expended, during the year, about \$50,000 in improvements to the Lake Louise Chalet.

NEW BATH HOUSE.

In former reports I drew the attention of the department to the total inadequacy of the accommodation at the baths at the sulphur hot springs. It has given me the greatest amount of pleasure to learn that the suggestions made in my reports have been recognized, and that an appropriation has been made by parliament for the purpose of erecting a modern bath-house. Work will commence early in October after the rush of the season is over, and we hope to have it completed in time for the season of 1912. Plans are now being prepared which provide for one of the most up-to-date bath houses on the continent of America, being principally of marble.

BUFFALO PARK.

As will be seen by the report of Superintendent Ellis of the Buffalo Park at Wainwright, the animals in that park are doing exceptionally well, and a large natural increase may be expected in the future. The Buffalo imported from Montana have taken very kindly to their partial confinement and appear quite contented with the grazing ground provided by the government.

During the year seventy-four head were brought in from the Pablo range in Montana, and in order to introduce new blood into the herd it was considered advisable to purchase thirty head from the Conrad herd in the Kalisper valley. Fifteen of these were brought in in October 1910 and the remaining fifteen in March of this year. There is no doubt that the crossing of these with those of the Pablo herd will be of great benefit and counteract the effect of any inbreeding that may have taken place.

It was hoped that Pablo would have completely cleared the range and delivered all the animals contracted for by April 1, but, after repeated efforts, he was forced to abandon it as the animals had become scattered over a wide extent of country and could not be collected. Mr. Pablo is making another heroic effort to round up the balance of the herd and it is his intention, in the event of being unable to collect the whole of the number still at large, to shoot them without reserve. He is doing everything in his power to fulfil his contract to the letter and ship every animal that it is at all possible to secure. During the winter twenty-five old bulls, which had become very fierce, charging the riders and proving themselves a nuisance in the efforts to collect the other animals, were destroyed.



Buffalo grazing in Buffalo Park, Wainwright, Alta.

Photo by J. H. Gano.

I cannot speak too highly of the good faith of Mr. Pablo in connection with the delivery of the buffalo contracted for by the Canadian government. He has acted in an upright, honourable manner all through the transaction, and his failure to deliver the last animal in his herd has been through no fault of his.

At the present time there are 809 buffalo in the park, an increase of 110 during the year. The loss during the year was seven head, four of which, however, were injured in shipping, so that the actual loss in the park was only three head. It is the intention to move about fifteen or twenty buffalo to the Moose Mountain Park during the present summer as the nucleus of a herd in that Park, for which an inclosure, about 2,500 acres, will be fenced off. Conditions are favourable for the placing of a number of buffalo in this Saskatchewan park, which was one of their favourite feeding grounds. Hitherto they have all been placed in Alberta. Although the past winter was unusually severe, a comparatively small amount of hay was used to feed the buffalo, which were not fed more than six weeks during the winter. As soon as the mild weather set in the animals left the hay and went back to grazing in the open prairie.

The Buffalo Park has proved a success in every particular, and has shown the wisdom of the selection of the location, not only as a home for the buffalo, but for other animals native to the country.

During the year, 11 moose, 7 elk, and 9 antelope were purchased and placed in the park. All are doing remarkably well with the exception of the antelope, six of which have died, notwithstanding the most careful attention.

I would recommend that a number of old buffalo bulls be disposed of in the month of December, when their coats or fur are at their best, as it would appear that there is no object in keeping this surplus stock after they are ten or fifteen years of age. I have no doubt that better results, in the way of increase, will be achieved with a fewer number of bulls in the herd.

The park as it becomes better known is attracting a large number of visitors and there is no doubt that when the Grand Trunk Pacific railway is completed to the coast, it will be visited by thousands of tourists, as it will contain by far the largest herd of buffalo in the world.

ELK ISLAND PARK.

In Elk Island Park, there are at present a total of 48 head of buffalo, the majority of which are males. The increase during the year was six, with no loss.

Some twelve hundred people visited this park during the summer, it being a favourite resort for campers from Edmonton and Fort Saskatchewan.

We also have a considerable number of moose, elk and deer which are increasing very satisfactorily.

WATERTON LAKES PARK.

This new park in southern Alberta in the Waterton Lake district, situated along the International boundary line adjoining the Glacier Park in the State of Montana, is noted as being a favourite game preserve. This park, which was previously a forest reserve, was only taken over during the year by the department for park purposes, and contains an area of fifty-four square miles, the largest portion of which is mountainous. It has for years been a favourite camping ground for the people of southern Alberta. During the year, over two thousand people camped in the park, some of them remaining for periods of from two to three months. It is also a favourite fishing ground, the numerous small lakes which are fed by mountain streams being literally filled with trout.

The only work done in the Waterton Lakes Park was the cutting of a good horse trail, six feet wide and six miles long, from Cameron Falls in the park to the

International boundary line. Tourists can now ride through to the road in Glacier Park and the boundary line can be patrolled so as to prevent poaching from the American side.

During the year, 150 villa lots were surveyed along the shores of the lake and already we have applications for a number of them for building purposes.

It is my intention, during the present year, to improve the present roads through the park and to construct several new roads, making it more easy to get to the boundary line on both sides of the lake, also to build trails to other points of interest.

JASPER PARK.

In my last annual report I made slight reference to Jasper Park, an area of over five thousand square miles along the route of the Grand Trunk Pacific railway, set apart a couple of years ago as a national park. At that time very little was known officially of this park, and no work of a permanent nature could be entered upon, owing to the fact that the railway construction had not reached the park. Mr. J. W. McLaggan, chief forest ranger, was appointed acting superintendent, temporarily, with two forest rangers. Mr. McLaggan's duties consisted of fire and game protection, carrying out the park regulations generally in regard to cutting timber, preventing squatters settling in the park and negotiating for the removal of those already there. He also had the oversight of the park generally, and one of the important parts of his work was the regulation of the stopping places and camps established in the park for the convenience of the railway construction work and to see that they were placed in such locations as, while serving the purpose for which they were established, would not destroy any of the natural beauties of the park. He also took care that no undesirable class should be allowed to enter the park and establish places of resort which might not be to the welfare of the men engaged in railway construction.

At the time that the park was reserved by the government there were a number of squatters settled in it, some of whom had been there for a great many years, in fact some of them had been born there and had grown up in the Jasper Pass. As it was not desirable that they should remain in the park, and as they had certain rights, negotiations were entered into for their peaceful removal. These negotiations, I am pleased to state, were, with one exception, successful; and at the present time only one man has refused the terms offered by the government and persists in retaining the lands on which he settled as a squatter.

As will be seen by the report of Mr. McLaggan, in spite of the fact that railway construction is being carried on through the entire length of Jasper Park and that a large number of men are employed, the park regulations are being well enforced. There has been very little destruction from forest fires, or killing of game or lawlessness. Mr. McLaggan reports having had the hearty support of the railway company and contractors in carrying out his duties. Without this co-operation it would have been impossible to have prevented destructive fires where such a long stretch of right-of-way is being cleared and where there are so many freighters camping along to tote road. The railway grading work extends for sixty miles within the park limits and thousands of men and hundreds of teams were employed. These freighters often camp at noon and some of them at night in the open and build camp fires. This required constant supervision and patrolling and there is no doubt that had this not been done, serious fires would have resulted.

In March of this year, I made a trip of personal inspection to Jasper Park, for the purpose of investigating as to whether it would be advisable to engage in any work of a permanent nature during the coming season.



Photo by D. B. D., 1910.
"The Punch Bowl," at Jasper Collieries, Jasper Park.

I left Edmonton on March 24th, travelling by the Grand Trunk Pacific Railway to the end of steel at Prairie Creek, 183 miles west of Edmonton and three miles from the eastern boundary of the park. At Prairie Creek I was met by Mr. McLaggan and together we made the trip by team through the park, travelling over the tote road built by Foley, Welch & Stewart, contractors for the grading work of the Grand Trunk Pacific, for the purpose of freighting goods to their different camps along the right-of-way.

The first day's travel brought us to the Jasper Park Collieries, near the mouth of Fiddle creek, twenty-two miles within the park by rail and twenty-five miles by the tote road. The park up to this place is practically the entrance to the foot hills, the valley of the Athabaska river being from five to eight miles wide and mostly timbered with spruce and jackpine. An extensive timber limit extends into the park, the timber not being of a very high class for commercial purposes.

PLATE VI.



Photo by R. C. W. Lett.

On the trail to Hot Springs, Jasper Park.

One of the purposes of my trip was to investigate the feasibility of establishing a townsite at or near the mouth of Fiddle Creek, about ten miles up which the hot sulphur springs are located. These springs, which I visited on my former trip, are located just east of Mount Roche A'Miette, whose sphynx-like head rises 9,000 feet above the level of the sea and forms a landmark for miles in every direction. The springs are at an altitude of 4,200 feet and are about 1,200 feet above the Grand Trunk Pacific. Two of the cluster of springs boil out of the side of a very high mountain and have a temperature of 116 degrees, which is three degrees hotter than the sulphur springs at Banff. They are highly charged with mineral properties and have a flow equal to the intake of a four inch pipe. There are a number of other springs in the immediate vicinity, one of which has the remarkable temperature of 125 degrees.

The canyon of Fiddle Creek, leading to the springs, is one of the most magnificent pieces of scenery yet discovered in the Rocky Mountains. This canyon towers for hundreds of feet, and in places the channel, worn by the water in past ages and through which it rushes with a mighty roar, is not more than twenty feet in width. To my mind this will become a very attractive place of resort for tourists in the future.

After an investigation of the mouth of Fiddle creek I concluded that it would not be advisable to make any survey of a townsite there until a traverse and survey of Fiddle creek had been made and also of the shortest route by which to pipe the water, which, from my present knowledge, I would consider probably to be at the Jasper Park Collieries, as being the nearest point to the springs and the most convenient to the railway lines. I would also recommend that surveyors be sent in there, during the coming year, with a view to locating a route for a carriage drive from the railway line to the springs, not particularly to locate the shortest route, but one that will give access to the beautiful scenery in the canyons, &c., leading to the springs. There is a very suitable location for a townsite near the collieries, which I consider more advantageous than that at the mouth of Fiddle creek. However, either one would be well adapted for the purpose.

At the Jasper Park Collieries, where we spent the night of March 25, a large amount of development work has been done, considering the fact that the company started operations only about a year ago. At the time of my visit a tunnel had been run 900 feet and was in a solid face of coal. Twenty-five men were employed and development work along different lines is being pushed ahead pending the laying of the steel on the Grand Trunk Pacific to this point. The mouth of the present tunnel is 275 feet above the railway line, and it is the intention of the company to drive another tunnel lower down and only a few feet above the track. The claim consists of 1,080 acres of coal lands on which three seams of fourteen feet, thirteen feet and five and a half feet in thickness have been explored for the entire length. The coal is of a very high quality of bituminous, somewhat similar to that found in the Crowsnest Pass, and is especially adapted for steam and domestic purposes.

A test of its cooking qualities was made in a crude stone coke oven built at the mine, the result being highly satisfactory, the product being pronounced equal to the best manufactured anywhere. The company have built excellent quarters for their employees and I found everything in connection with it in first-class condition. They are at present engaged in the construction of a tramway from the tunnel mouth to the railway track and a tippie for loading cars. They expect to be in a position, when the railway reaches this point, to supply all the coal required for the operation of this section of the road, in addition to a supply for shipment east for domestic and other purposes. The company is composed, principally, of local men with some outside capital.

From the townsite at the Collieries, previously mentioned, a magnificent view can be had of the broad valley of the Athabaska, alternating in meadow and clumps of trees, which gives it a beautiful park-like appearance. This with the mountains, including the Roche A'Miette and other peaks, as yet unnamed, forms one of the most lovely scenes imaginable.

I might mention here that in the valley at this point a band of twenty-eight horses lived out during the whole of the past winter, and on the occasion of my visit although they had not been fed anything but what they could rustle for themselves, were fat and sleek and in fit condition to go to work at any time. This would indicate that the climate in Jasper Park is even milder than that farther south. As a matter of fact the lack of snow during the past winter was one of the greatest drawbacks against which the railway contractors had to contend, there being only about three weeks of sleighing and in many cases freighters used wagons the whole season.



Lake Helena, at foot of Mt. Robson, British Columbia, Shoulder of Mt. Robson on right. Adjacent to Jasper Park. Photo R. C. W. Lett.

This is the more remarkable in view of the fact that further east and south the winter was more than usually severe and the snowfall unusually heavy.

Fourteen miles west of the Jasper Park Collieries the Grand Trunk railway line crosses the Athabaska river at a very slight elevation above the water. The concrete piers were being constructed and it is expected that trains will be crossing the river in June of the present year. By that time it is hoped to have the grade completed to the entrance to the Yellowhead Pass, where the line leaves the Athabaska river and follows the Miette river to the summit, and to have the steel laid to this point by the end of July.

After crossing the river the drive up the valley is one of transcendent beauty. The valley is from three to five miles in width and is a natural park partially wooded and partially open grazing land. About eighteen or twenty years ago it was swept by a fire which destroyed almost all the timber, and the young timber, which at places is very dense, is making a very rapid growth. It would appear that nature intended this for the purpose to which it has been devoted.

At places the valley narrows and on rounding some point of rock or foothill new vistas of beauty meet the gaze. At different places the river expands into shallow lakes, the principal of which are Brulé lake and Jasper lake. Fish lake, a beautiful sheet of water, is separated from Jasper lake by a narrow ridge of land over which the line of the Grand Trunk Pacific runs for about three miles.

On either side of the valley are ramparts of hills behind which are towering snow-capped mountains rising in majestic grandeur and overlooking the beautiful valley. What is beyond this first range of mountains is yet unknown and it will for years to come form an inviting field for the adventurous exploring tourist.

Innumerable mountain streams, fed by the glaciers on the mountain tops, come rushing down over waterfalls and rapids to mingle their pure waters with those of the Athabaska. At one place, known as 'The meeting of the Waters,' where a number of small streams join the Athabaska, there is a scene of surpassing beauty. The river leaves Jasper lake by seven distinct channels, forming beautiful little wooded islands. These channels unite again to form one broad river. Along the route are a number of places of historic interest.

Nothing remains to mark the site of the old Jasper House, which at one time was a busy trading post of the Hudson's Bay Company, except a pile of stones which formed the rude fire place and some dilapidated graves, with their tumble down and decaying wooden palings and crosses which mark the sleeping places of those who in the long ago spent their lives in this remote part of the west.

The ruins of Henry House, the former headquarters for this region of the North West Fur Company, are just opposite the point where the Maligne river joins the Athabaska and is another point of historic interest, and it seems a pity that these two houses could not have been preserved as relics of the past.

At intervals along the valley are camps of graders and stopping places for freighters and travellers. These I found in good condition and, in general, conforming to the park regulations governing such places.

Forty-eight miles of the valley of the Athabaska from the eastern boundary of the park and at the junction of the Miette and Athabaska rivers is the proposed divisional point of the Grand Trunk Pacific. At present it is named by the Railway Company. 'Fitzhugh,' in honour of the Fourth Vice-President of the Grand Trunk Railway Company. The townsite is located on a level plateau about sixty feet above the valley of the Athabaska river. It is about two miles in length and about a mile in width. It appears to be well adapted for all the purposes of a divisional point and for a townsite on which to locate a tourist resort. The townsite overlooks the beautiful wooded valley of the Athabaska, which here stretches away for miles to the southwest, forming a very lovely picture. The Miette river comes rushing down from the summit of the Pass, fourteen miles distant, to swell the waters of the Athabaska. In the background, in every direction, are towering mountains, and among

the hills, at an elevation of about 200 feet above the townsite, is a bench of land with two beautiful little lakes of the purest water. These, in addition to proving a great attraction to tourists, would supply sufficient water for a considerable town, which will undoubtedly grow up here, both from a tourist point of view and as a place of residence for employees of the railway. A survey of a tourist townsite for park purposes will be made during the coming season. This will be the starting point for many tourist parties up the valley of the Athabaska to the falls about ten miles distant. These falls have a sheer drop of eighty feet and are about 150 feet in width. The town will also be on the direct route to Mount Robson, which will be a future mecca for mountain climbers, as being the highest peak and the most difficult of ascent of any in the Rockies.

A contract has been let for the construction of a trail to Maligne lake, a distance of about thirty miles, to be finished before the end of June. This lake has been described by Mrs. Schaffer, of Philadelphia, the only person of note who has ever visited it, as being the most beautiful sheet of water she has seen in fifteen continuous years of exploration in the Rocky Mountains.

Fitzhugh is at present the headquarters for the engineering staff of the Grand Trunk Pacific, also the base of supplies for all construction material for the railway and will remain so until the steel reaches Tête Jaune Cache. The townsite is overgrown with a thick growth of young evergreens, which only require to be thinned out to form one of the loveliest parks imaginable.

I might here mention that the Canadian Northern Railway Company has its line surveyed through the park parallel to and at a short distance from the Grand Trunk Pacific, but as yet has done no grading in the park limits. While the Grand Trunk Pacific enters the park on the east side of the Athabaska river, the Canadian Northern railway enters on the west side of the river and does not cross the river at all within the park. In passing through the Yellowhead Pass both lines will traverse the valley of the Miette river, which at places is very narrow, and it would seem that considerable engineering difficulties will be encountered to provide room for both roads. The grade up the Athabaska river valley to the entrance of the Yellowhead Pass is the easiest of any on the continent of America, the grade of the Grand Trunk Pacific from the entrance of the park to the summit being only four-tenths of one per cent, with very little rock work. In fact the construction of the road for this distance presents no more difficulties than building a road over the prairie. The altitude at Fitzhugh is only 3,520 feet and the altitude of the summit, at the highest point of land along the railway line, is 3,715 feet.

I have been repeatedly asked to make a comparison of the attractions of the Jasper Park and the Rocky Mountains Park, but have always refrained from making any such comparison. Both have their distinctive features, which must make them continue, for all time, favourite resorts for tourists from all parts of the world. It is hoped that in a short time the two parks may be united by adding the territory which now separates them, forming one continuous park, the largest in extent, and containing the greatest variety of and the most magnificent scenery in the world.

There are many other matters of which I would like to speak at this time in connection with these parks and the importance of keeping the public in close and intimate touch with our work. I feel that, if we are to attain our highest usefulness in the work we are trying to do, it is absolutely essential that we have the hearty co-operation and sympathy of the people of Canada and that they will see to it that means are not lacking to carry the work to a successful issue.

In conclusion, I wish to express my appreciation of the generous support given to the work by the Honourable the Minister of the Interior, and to congratulate his department on its excellent choice in the appointment of the superintendents of the different parks. These gentlemen have fulfilled their duties faithfully, honestly and

in the best interests of the department. Every other official of the department with whom I have had dealings has accorded me the most courteous treatment and all appeared to be anxious to further the interest of what I consider to be one of the greatest assets of the Dominion.

Appended you will find the reports of the superintendents of the different parks under my supervision.

I have the honour to be, sir,

Your obedient servant,

HOWARD DOUGLAS,

Commissioner of Dominion Parks.

No. 2.

REPORT OF THE SUPERINTENDENT OF THE ROCKY MOUNTAINS
PARK.

BANFF, ALBERTA, March 31, 1911.

The Commissioner of Dominion Parks of Canada,
Edmonton, Alberta.

SIR,—I have the honour to submit herewith my first annual report as superintendent of the Rocky Mountains Park of Canada for the fiscal year ending March 31, 1911.

As my appointment did not go into effect until the month of June, 1910, I feel that all the credit for the successful completion of the work is not altogether due to me, as a greater part of the plans and arrangements for the expenditure of the appropriation were made previous to the time I took up my duties here.

I am pleased to be able to report a most successful year in every respect and I have endeavoured to show every detail of the progress of work and conditions.

The amount of cash revenue collected at this office on account of the Mining Lands and Yukon Branch does not equal the collection for 1909-10, but when the payments of the majority of the coal companies on account of rental that were made at Ottawa direct, and which were formerly paid here, are taken into consideration, the increase will be found to be very large.

The Timber and Grazing Revenue shows a gratifying increase and the Forestry Branch Revenue has been much greater. We are not able at this time to ascertain accurately the amounts paid at Ottawa but when those we are certain of are added to our cash revenue it shows an increase of over 37 per cent.

GAME AND FIRE PROTECTION.

The proper protection of our large numbers of some of the very best game in North America will always be a matter of considerable trouble in this locality, until the means are placed in our hands to have a staff of sufficient strength to keep a careful and systematic watch over the main trails leading to and from the Rocky Mountains Park. Although the majority of the tourists and inhabitants appreciate and observe our game laws, there are always a few willing and anxious to take advantage of the absence of the game guardians to kill game within the park limits. One party so disposed can do a great deal of damage in a very short time and I believe our system of giving head guides return seals for the guns in their parties is not a safe and satisfactory method of protection. I hope some day in the near future our appropriation will provide for the maintenance of a game guardian at three different points on the Red Deer river during the summer and fall months, so that all parties must have their guns sealed when returning to the Park.

One party was caught last year in the act of killing Rocky Mountain sheep, and an example was made of him by imposing the maximum fine and confiscating the heads and meat of the two sheep he had killed; and another person in the same party was fined for having an unsealed rifle in his possession.

We experienced some little difficulty with persons who had suffered from depredations of bears, as under the Park Regulations no one was allowed to carry a rifle unsealed, and they were therefore unable to destroy the animals that were demolishing their property; but there is very little likelihood of such cases arising in the future as we are now working upon a safe and systematic plan whereby these animals may be destroyed.

The appointment of temporary game guardians during the winter months has proved very satisfactory. Seven of these guardians were sworn in late last fall. They are merely allowed to carry unsealed rifles for the purpose of destroying lynx and coyotes. During the past three or four months they have reported killing about thirty coyotes. This is an exceptionally good record for a mountain district.

The past year has seen four convictions for carrying unsealed arms and two convictions for killing game, but I will venture to say that this does not constitute the full list of poachers within the park.

I notice in your last year's report that the sheep and deer were becoming very tame in the town of Banff, and in this connection I might mention that a large flock of mountain sheep have been feeding on the south side of Squaw mountain most of the winter, and the number of deer in the town that were becoming tame last year have become so familiar as to be little less than domestic pets this winter. Numerous times they have been fed in my own yard and could be seen at almost any time.

FIRE PROTECTION.

This branch of the work in connection with every park or forest reserve is without doubt one of the most, if not the most important consideration. One small fire, if not properly guarded against, can in a short space of time convert our present beautifully wooded park into a black and barren waste, drive our game from the country and leave practically nothing but the bare mountains and streams. Although our game and fire guardians have little else to do in the winter than patrol their regular rounds, they have worked early and late during the middle summer and fall and have been constantly on the alert for any fires. They report two fires at the east end of Lake Minnewanka, caused by the negligent campers. One large fire came down from the Brazeau and Ghost rivers to a point near the east end of Lake Minnewanka and we had to send a party of fighters out from here to prevent it getting into the park, which, I am glad to say, was accomplished after considerable work. Our guardians also extinguished deserted camp fires at the mouth of Panther river and on the Bow river, as well as fires of the same nature on the Spray and Kananaskis rivers. This makes a total of seven camp fires extinguished that might have become serious, but when it is understood that there were over twenty large parties of tourists outfitted here during the season, it will be seen that care has been exercised in issuing permits to the men in charge of these parties, as we cannot lay the blame of any of these fires to any of the guides, and it is my opinion that they have exercised commendable care in the location of their camp fires and in putting them out before leaving them.

The source of our greatest danger is from locomotives. We had fire guardians making two trips per day on velocipedes between Banff and Laggan, and one between Banff and Canmore. This is a distance of little more than sixty miles, and in that short distance these men extinguished no less than fifteen fires which they claim were in every case started by the sparks from the engines. However, I may say that the Canadian Pacific Railway Company have aided us this year by putting men to work clearing up all the dead trees and brush on the right-of-way, and if this same spirit of co-operation is manifested during the coming season it will greatly reduce the chances of fires catching from the locomotives.



Mountain Sheep in Rocky Mountains Park, Banff, Alta.

In addition to the foregoing there was a fire started on the north side of Sulphur mountains in the neighbourhood of the Middle Sulphur Springs, and we had to call out a large force of men before it was finally put out. I have been unable to ascertain the cause of this fire.

ROADS, BRIDGES AND FENCING.

Between Canmore and the Gap a new Queen truss wooden bridge with planked floor was erected, fifty-six feet over all; and one half mile of the Calgary to Banff coach road completed in the neighbourhood of Exshaw. At Canmore, we built one and a half miles of new road and one new bridge of wood with 30 feet stringers and plank flooring with a driveway 14 feet wide; and another at the same town of practically the same dimensions except that the driveway is sixteen feet wide.

PLATE XI.



Consolation Lake, Mt. Temple Rocky Mountains Park.

The Bow river bridge at Canmore was replanked a distance of two hundred and fifty feet as well as the fifty foot approaches at each end, making in all 350 feet of new planking on this bridge.

At Stony creek we erected a wooden bridge fifty-six feet over all, with Queen truss and 14 foot planked driveway. The old Duthill grade was lowered from a 15 per cent to a 6 per cent grade, and a culvert put in the coulee between Duthill and Stony creek.

In order to avoid the steep hill on the Spray river road it was necessary to grade a new road for a distance of one quarter of a mile. During March of this year we also built a bridge over the Spray river to connect with the trail to the Spray lakes. One span is 45 feet long with small truss and two additional spans of thirty feet each; also two twenty-five foot spans six feet inside, and all planked, with handrail on both sides. This bridge will be used only as a foot bridge and for pack horses, &c.

On the Laggan to Moraine lake road, a distance of about one and a quarter miles was completed, so that there now remains but little over one half mile before the road is completed to the lake. This drive is a very popular one.

Now that the most difficult work in connection with the Banff to Calgary coach road has been accomplished and only grading, gravelling, &c., remains to be done to make it a first-class coach road, it has been deemed advisable to extend this work from

PLATE X.



Photo Howard Chapman.
Mounts Bident and Quadrant, above Consolation Lake,
Rocky Mountains Park.

Banff to Laggan, thereby making an automobile and coach road from Calgary to Laggan, a distance of about one hundred and twenty-five miles.

At the buffalo paddock, one and a half miles of new wire fencing was erected for the Rocky Mountain sheep inclosures, and three-quarters of a mile of rail fencing rebuilt around the buffalo field. A number of streets were put in first-class shape and the Lake Minnewanka road repaired. Every road at the end of the season was in an excellent state of repair.

TRAILS.

The trail through the Mount Edith pass to the Sawback lakes was impassable last spring, as hundreds of trees were broken and thrown across it by the wind, thus choking it the greater part of the distance to the lakes. The clearing was completed and all stumps and trees on the lower side were cut off low to the ground, and the trail widened to six feet. The Pass is now clear for comfortable travelling direct to the lakes and was in constant use during the summer and fall by large parties of fishermen.

PLATE XI.



Mount Assiniboine, "The Matterhorn of the Rockies". Height, 11,500 ft.
Rocky Mountains Park.

On the north side of Lake Minnewanka the trail was widened and well cleared from one end of the lake to the other, so that parties may now make this trip on horseback, whereas, heretofore, they have been obliged to take the steamer. The length of this trail is fourteen miles and is one of the most beautiful rides in the Minnewanka locality and fills a long felt want.

An excellent trail was completed to the Spray lakes, 24 miles southeast of Banff. For a number of years this has been in such a shape as to be almost impassable for

horses, and the trip was only undertaken by those whose love for good fishing exceeded their fear of hardship and difficulties. Since its completion it has been in constant use during the fishing season. The very best rod fishing within the Rocky Mountains Park is found at the Spray lakes, Cut-throat trout averaging two pounds each rise readily to the fly, and a lover of this kind of sport will be doubly repaid for making this trip to the lakes, which has been made accessible by the building of this trail. It is also possible to go by this trail to the famous Mount Assiniboine (altitude 11,500), which has attained a world-wide reputation for its magnificence and beauty and has lured hundreds of Alpine climbers from all over the world to attempt its ascent, only a few of whom have been successful.

SIDEWALKS AND PATHS.

The increased patronage of Banff by tourists necessitated either the widening of the old plank sidewalk on Banff avenue or replacing it by something more substantial. It was therefore decided to put in a new cement walk, and an appropriation was granted for this purpose. Work was commenced in October and was completed within four weeks. It was built from Buffalo street to Cariboo street, a distance of 750 feet on each side of the road or a total of 1,500 feet of walk twelve feet wide. It adds greatly to the beauty of the thoroughfare, and although the cement was mixed and the walk made late in the fall, when some frost was experienced at nights, it is in excellent condition and has suffered no injurious effects from the extreme cold of the past winter.

In addition to the cement walk, we built 5,000 lineal feet of six-foot cinder paths on streets where there were sufficient residents to warrant the expenditure, so that people are now enabled to walk to their homes without having to wade through mud and water, and it is my intention to continue building these paths during the coming season, where and when required.

TELEPHONE SYSTEM.

Previous to this year our telephone system allowed for about fifty 'phones only, but prior to my appointment arrangements and purchases were made to increase the capacity to one hundred 'phones. This work was completed, so that should occasion demand it, we can supply one hundred subscribers. Although we have more 'phones in use than we had a year ago it will be observed that the revenue does not equal that of the fiscal year 1909-10. This is due to the lowering of the rate for resident phones from \$18 per year to \$15 and business phones from \$36 per year to \$20.

The work for the year consisted in the setting of fifty new cedar poles; stringing new wires; installing a new cable box and cable; and in addition to this, 15 new 'phones and other equipment were purchased.

OTHER IMPROVEMENTS.

One lane was opened in order to allow access to residents who had taken up lots at the foot of Tunnel mountain.

As our animal quarters back of the museum were becoming somewhat crowded, we built six new dens with cement floors and inclosed with heavy 1½-inch mesh iron wire netting fastened on tubular iron frames; also an octagon-shaped cage for eagles, &c.

The filling in and sodding of the museum grounds was finished, which has added greatly to its beauty and to the comfort of sightseers who visit the place in thousands. Last season the grass was long enough to be mown and during the coming season I expect to show a beautiful garden spot of this inclosure.

WATER WORKS AND SEWER SYSTEM.

Our work on the water and sewer system consisted chiefly of making water and sewer connections. This winter there were a few cases of frozen pipes where consumers had left their houses vacant and neglected to notify the office to shut off the water. We also had to renew parts of broken sewer pipes; but at the present time the whole system is giving the best satisfaction, with the exception of the intake. Late last fall an engineer was employed to look into this portion of our system and he reported the affair to be of altogether too crude a nature for such a system and recommended certain changes and improvements, such as devices to prevent the intake becoming filled and clogged with sticks, rock and gravel.

Copyright by Byron Harmon.



Wild deer on Superintendent's lawn Banff, Rocky Mountains Park.

There was also considerable diking done on Forty Mile creek to protect the main water pipe from the intake, so that about all the necessary improvements required in this locality are confined to the intake for the coming season.

LOTS AND BUILDING.

This year has seen a great increase in permanent residents and applications for lots; there were fifty new applications and three-quarters of these have already been granted leases in consideration of the buildings erected upon their lots. The erection of these buildings has brought considerable money into the town, and a very conservative estimate of the amount spent on summer cottages and good houses would bring the total to over \$30,000; but, when the different amounts spent on the improvements of their grounds, such as lawns, fences and walks, are taken into consideration, this total would easily reach \$35,000.

In addition to the new residences built, the new Brett hospital was erected at a cost of \$60,000, new Canadian Pacific railway station \$35,000, King Edward hotel

addition \$2,000 and the Banff Springs hotel \$80,000; which brings the total amount spent in Banff on buildings to the pleasing total of \$212,000 or nearly a quarter of a million dollars. To my mind this is sufficient proof of the permanency of Banff as a tourist resort and of its ever-increasing popularity.

I am pleased to report a much better class of buildings erected and fewer \$300 structures than in the past.

In addition to the large number of applications and leases granted for Banff townsite lots, there have been thirteen applications for Minnewanka townsite lots, and a number of these applicants are constructing their buildings.

For a great many years the residents of Canmore have been squatters upon the lots in that town, but this winter the whole ground was carefully gone over and every resident visited and their buildings inspected. This undertaking resulted in the granting of thirty-one leases and fifteen agreements, and it is expected that about twenty more will be granted within the next two months. This will make sixty-six lots under lease or agreement when added to the forty-six already granted, whereas formerly there were not over half a dozen or so. I might add that the Canmore lots (inside) are rented by the government for \$8 per year and corner lots \$9.50, subject to building conditions.

AVIARY.

Since the last annual report we have added one silver pheasant, two golden pheasants, two English ring neck pheasants, one grey horned owl and one golden eagle. They are all in excellent condition and are doing as well as a flock of well-cared for domestic fowl. They are inexpensive to keep and add greatly to our list of attractions. I have to report the death of one golden eagle and one of the North American vultures. At the present time we have in the cages the following:—

Grey Horned Owl.. . . .	1
North American Vulture.. . . .	1
Reeve's Pheasant.. . . .	2
English Ring Neck.. . . .	4
Golden Pheasant.. . . .	3
Silver Pheasant.. . . .	3
Lady Amherst.. . . .	2
<hr/>	
Total.. . . .	16

THE FAUNA OF THE PARK.

All the animals confined in the Museum grounds cages have done unusually well this winter, and aside from the loss of one of the timber wolves, there are practically no losses to report. The wolf that died was the old male which has been in the possession of the park for a number of years, and expired of old age. In your report ending March, 1910, you mentioned five timber wolf puppies, and I wish to state that one of these, I am informed, was killed by the coyotes in the adjoining cage. Two of the remaining four were sold to an officer in the British Army and taken to England, which accounts for these animals. I also notice that you reported three young raccoons, but when I took up my duties here two of these had been killed by the male, but one was saved, however, and is doing nicely, although it had one foot eaten off. We had one female badger presented to the park, and these animals and the kit foxes appear to be doing one hundred per cent better since the new cages were built with the earth floors, which allows them to burrow and make nests under the ground. There are at this writing the following animals in the Museum cages:—

Black bear.. . . .	1
Brown bear.. . . .	1
Cinnamon bear.. . . .	1
Mountain lion.. . . .	1
Timber wolves.. . . .	3
Coyotes.. . . .	2
Kit fox.. . . .	3
Red fox.. . . .	2
Lynx.. . . .	3
Raccoons.. . . .	3
Badgers.. . . .	3
Marmot.. . . .	1
Wolverine.. . . .	2
Marten.. . . .	2
Mexican orange squirrels.. . . .	3
Mexican black squirrels.. . . .	2
Fox squirrels.. . . .	3
Rhesis monkeys.. . . .	2
Guinea pigs.. . . .	8
Porcupines.. . . .	3
Total.. . . .	49

I might add that early last spring two Rhesis monkeys were purchased and these proved a great attraction. I was somewhat dubious as to these animals living through our rigorous winters, but I am now satisfied that these specimens can be kept here with more success than they can where the climate is warmer and more changeable. They were confined in the old pheasant house, and at no time was there a fire in the building. During the coldest weather their fur would be covered with frost, but the temperature was never changed except by the influence of the outside weather conditions. It is my opinion that had they been kept warm by artificial heat they would not have lived.

ANIMAL Paddock.

Since the seventy-seven head of buffalo were sent from here to Wainwright the remaining ones have shown a marked improvement. The caretaker reports them to be in much better condition now than they were at this time last year and I attribute this to the sufficient pasture afforded them by the lessening of the herd when the shipment was made to Buffalo Park. Seven magnificent three-year-old bulls were delivered to us from the Pablo herd and I expect to see a decided improvement in the progeny now that we have new blood. I have to report an increase of two in addition to the seven delivered from Wainwright, and the decrease of one that was killed and sold. This last was an old hybrid cow, and it is the intention to get rid of all impure stock. This leaves twenty-four head including two hybrids. Every head of all kinds has wintered well, and with the exception of a few deaths everything came through satisfactorily.

The Rocky Mountain sheep have become so tame as to allow the caretaker to feed them by hand. Whereas formerly the tourists asked to be directed to the buffalo they now as a rule request information as to where they can find these sheep.

During the past year we have lost two antelope, one white-tail deer and one kid Angora goat, by coyotes. There has been an increase of four moose, one elk, one white-tail deer, one mule deer and three Angora goats.

Professor Bell, of Nova Scotia, presented us with three Zulu sheep, which are something of a curiosity as they carry four long well-formed horns but otherwise resemble the Angora goat. It will be observed that we have but one mountain



Young Moose in Buffalo Park, Wainwright, Alta.

Photo by J. H. Gano.

goat remaining as another was lost last winter. It is my opinion that these animals will never prove a success here. In their wild state they are seldom if ever found in the same neighbourhood with the Rocky Mountain sheep. The reason for this is not well understood but it is probable they live on a different kind of food from that of the sheep, and then they may require something necessary for their health and life that is not palatable to the sheep. The condition of these two species would bear this out as the sheep are fat, sleek and contented, whereas the goat have appeared to pine away and die. The only other animals not thriving are the antelope. They are still subject to ulcers in the throat and neck, and it appears to me the climate or food is not suitable for them. Since the above was written three of the antelope have been transferred to Buffalo Park.

The caretaker reports 20,365 visitors, which is a large increase over the patronage for 1910.

The following is a complete list of all the animals now in the animal paddock:—

Buffalo males.. . . .	16	
Buffalo cows.. . . .	4	
Buffalo heifers.. . . .	2	
Hybrids.. . . .	2	
	—	24
Moose bulls.. . . .	9	
Moose cows.. . . .	10	
	—	19
Elk males.. . . .	7	
Elk females.. . . .	7	
	—	14
White tail deer buck.. . . .	1	
White tail deer, does.. . . .	2	
	—	3
Mule deer, bucks.. . . .	5	
Mule deer, does.. . . .	4	
	—	9
Angora goats, male.. . . .	2	
Angora goats, female.. . . .	4	
Angora goats, kids.. . . .	3	
	—	9
Persian sheep, male.. . . .	1	
Persian sheep, female.. . . .	3	
	—	4
Antelope, male.. . . .	3	
Antelope, female.. . . .	1	
	—	4
Zulu sheep, male.. . . .	1	
Zulu sheep, female.. . . .	2	
	—	3
Mountain sheep, males.. . . .	2	
	—	2
Mountain goat, female.. . . .	1	
	—	1
Total.. . . .		92

HOT SULPHUR BATHS.

Notwithstanding the lack of sufficient accommodation for the public (which inadequacy was even more apparent than the previous season) the cave and basin and the Upper Hot Springs contributed an increase in revenue of 25 per cent in excess of the proceeds for the last fiscal year. The caretakers advise me that they have been obliged to turn away hundreds of people who wished to take the baths, as it was absolutely impossible to accommodate them. It is my opinion that this cramped condition of the baths is a matter of such importance as to demand immediate attention and the remedy should not be delayed one day longer than is absolutely necessary. I am attaching a statement of the number of visitors and bathers to be included in the appendices.

SULPHUR WATER ANALYSIS.

It may be of interest to the public to reproduce the report of the analyst of the Canadian government, who says officially:—

The water is free from organic impurities and gives no albuminoid nitrogen. Each gallon contains dissolved sulphuretted hydrogen to the amount of 0.3 grains (equivalent to 0.8 cubic inch).

The dissolved solids are as follows:—

	Grains.
Chloride (in chlorides)	0.42
Sulphuric acid (SO ₃)	38.50
Silicia (SiO ₂)	2.31
Lime (CaO)	24.85
Magnesia (Mg)	4.87
Alkalis (as Soda, Na ₂ O)	0.62
Lithium	a decided trace.

The temperature of the spring is 114.3 degrees Fahrenheit.

COAL MINES.

The Bankhead Mines Limited, of Bankhead, and the H. W. McNeill Company, Canmore, ran full time for twelve months, and during that time mined a total of 555,040 tons of coal. This makes a total increase of 140,000 tons of coal, so that the expectations published in your last annual report have been fully realized.

CEMENT.

The works of the Western Canada Cement and Coal Company, of Exshaw, have been closed during the last twelve months, but I understand the company intends commencing operations again next month.

Before completing my report I am anxious to acknowledge the efficient and capable work performed by my assistants, as well as the valuable services of the officers of the Royal Northwest Mounted Police in enforcing the park regulations and maintaining law and order.

I have the honour to be, sir,

Your obedient servant,

A. B. MACDONALD,

Superintendent.

No. 2A.

REPORT OF THE CURATOR OF THE MUSEUM.

ROCKY MOUNTAINS PARK OF CANADA,

BANFF, ALBERTA, April 1, 1911.

The Superintendent
of the Rocky Mountains Park,
Banff, Alberta.

SIR,—The number of visitors during the past year, although not quite up to the previous year, shows a steady increase.

Additions to the exhibits have been a full sized Rocky Mountain goat and an exceptionally fine goat head.

The collection of insects, the work of which has been going on for some years, has been considerably augmented since last year by the addition of about 200 or more moths and other insects, some of which are very rare. This was partly the result of my last season's collecting (1910), during which I used almost every opportunity to increase the value of the insect collection.

The Lepidoptera were gone over and poor specimens replaced by better ones and more uniform labels substituted for the original labels; also more cases were prepared for specimens.

In the classifying of insect specimens I again have to acknowledge my indebtedness for much assistance from Dr. L. O. Howard, Chief of the Bureau of Entomological Branch of the Experimental Farm of Ottawa, through Dr. C. Gordon Hewitt and Mr. Arthur Gibson; also to Mr. Wolly Dod, of Millarville, Alberta, for much valuable assistance in naming Heterocerra.

I have also sufficient material on hand to make up an outside exhibit for the museum, and have been able to supply some of those whose assistance I have received with valuable material.

I am sure the department will not consider unfavourably a small annual expenditure for the purpose of extending the usefulness of the museum as a place of interest to the general public, and that as curator I should be allowed more opportunities of taking collecting expeditions.

During the winter of 1910-11, I numbered and made up a complete list with the common and scientific names and value, &c., of all the specimens in the museum for the Department of the Interior, Ottawa. This naturally took up some time and therefore with my meteorological work as well, I have had a busy winter. The usual amount of information was supplied.

In the weather report appended will be found data of interest.

I am, sir,

Your obedient servant,

N. B. SANSON.

Number of visitors at the Museum from April, 1910 to March 31, 1911:—

Canada.. . . .	7,344
United States.. . . .	2,555
England.. . . .	506
Scotland.. . . .	172
Australia.. . . .	71
New Zealand.. . . .	56
Ireland.. . . .	33
China.. . . .	29
Germany.. . . .	28
India.. . . .	27
New South Wales.. . . .	16
France.. . . .	9
Wales.. . . .	9
Austria.. . . .	9
Africa.. . . .	9
Hawaiian Islands.. . . .	8
Italy.. . . .	8
Russia.. . . .	6
Switzerland.. . . .	5
Mexico.. . . .	5
Ceylon.. . . .	4
Channel Islands.. . . .	3
Malay Peninsula.. . . .	3
Straits Settlements.. . . .	3
British West Indies.. . . .	3
Cuba.. . . .	3
Philippine Islands.. . . .	3
Hungary.. . . .	2
Spain.. . . .	2
Norway.. . . .	2
Yukon.. . . .	2
Greece.. . . .	2
Isle of Wight.. . . .	1
Tasmania.. . . .	1
Beyrout, Asia Minor.. . . .	1
Sweden.. . . .	1
Isthmus of Panama.. . . .	1
Roumania.. . . .	1

Total.. . . . 10,943

METEOROLOGICAL TABLES.

MAXIMUM and Minimum Temperatures and the General State of the Weather between
April 1, 1910, and March 31, 1911.

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum for day.	Minimum for day.	
1910.	°	°	
April 1....	43·0	18·9	Cloudy ; light snow fall.
" 2....	37·9	26·1	Cloudy ; Oregon Juncos common.
" 3....	39·3	12·9	Fair ; fine day.
" 4....	42·3	27·9	Cloudy.
" 5....	41·1	33·5	Cloudy ; rain ; moths, &c.
" 6....	40·9	32·7	Cloudy.
" 7....	40·0	25·8	Cloudy ; Bow river opening gradually.
" 8....	46·3	29·8	Cloudy.
" 9....	53·8	29·2	Cloudy ; Bow river open ; roads dry about town ; anemone patens in flower ; frogs piping.
" 10...	57·0	29·9	Fair ; very fine day ; wild geese ; Vanessa antiopa ; grass becoming green.
" 11....	56·9	31·7	Cloudy ; flicker.
" 12....	52·4	31·8	Cloudy ; catkins on aspens in flower ; rain and snow.
" 13....	37·9	29·4	Cloudy.
" 14....	41·1	18·4	Fair.
" 15....	53·3	25·2	Fair ; butterflies, &c. ; fine day.
" 16....	56·4	35·1	Cloudy ; ruby crowned kinglet ; fine day.
" 17....	59·0	28·8	Fair ; river rising gradually ; fine aurora ; very fine afternoon.
" 18....	61·1	31·6	Cloudy ; bumblebees.
" 19....	65·4	32·6	Fair ; water insects ; rain ; fine day.
" 20....	51·4	39·3	Cloudy.
" 21....	48·9	31·2	Cloudy ; lunar corona ; first gophers.
" 22....	59·0	37·7	Fair ; no snow about.
" 23....	69·5	31·1	Fair ; perfect day ; very fine night ; mallard ; osprey ; king fisher.
" 24....	72·6	37·3	Fair ; perfect day ; flying ants.
" 25....	75·4	30·5	Fair ; very fine day ; fine aurora ; aspens leafing ; fine night.
" 26....	72·8	33·3	Fair ; fine day ; aurora.
" 27....	60·8	36·4	Cloudy ; snow storm ; snow thaw rapidly.
" 28....	40·1	33·6	Cloudy.
" 29....	41·5	31·9	Cloudy ; snow ; San Diego Redwing ; Buffle headed duck ; grebe ; white crowned sparrows.
" 30....	37·1	30·2	Fair ; very fine day.
May 1....	47·9	18·3	Fair ; perfect day and very fine night ; launch on river ; Lake Min- newanka ice moving about.
" 2....	54·9	22·4	Fair ; perfect day ; fine sunset.
" 3....	59·9	23·9	Fair ; perfect day.
" 4....	65·5	26·9	Fair ; perfect day.
" 5....	71·3	30·1	Fair ; very fine day.
" 6....	67·8	34·1	Fair ; very fine day.
" 7....	67·0	40·1	Fair ; very fine day ; Calypso borealis in flower.
" 8....	57·1	39·3	Fair.
" 9....	51·0	27·3	Cloudy ; rain and snow.
" 10....	40·3	33·2	Cloudy ; light rain.
" 11....	60·8	29·3	Cloudy ; fine day.
" 12....	58·7	36·9	Cloudy ; fine day though cloudy.
" 13....	58·4	34·7	Clouds ; snow flurries.
" 14....	50·2	34·3	Cloudy.
" 15....	50·9	30·4	Fair ; fine day ; swallow.
" 16....	60·9	27·9	Cloudy ; fine day though cloudy.
" 17....	61·8	45·0	Cloudy ; rain.
" 18....	46·9	37·2	Cloudy.

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum for day.	Minimum for day.	
1910.	°	°	
May 19....	47.7	32.4	Fair.
" 20....	53.1	32.2	Fair.
" 21....	66.5	28.3	Fair; perfect day; many insects.
" 22....	71.5	37.9	Fair; perfect day and night; several flowers in bloom; comet seen;
" 23....	75.6	31.6	eclipse of moon visible.
" 24....	75.6	36.7	Fair; very fine day.
" 25....	71.3	44.4	Cloudy.
" 26....	58.0	41.2	Cloudy.
" 27....	49.2	37.2	Cloudy; rain.
" 28....	57.1	28.8	Cloudy.
" 29....	62.5	42.2	Fair; fine day.
" 30....	61.4	30.9	Cloudy.
" 31....	60.2	41.9	Cloudy.
June 1....	57.8	36.4	Cloudy; rain; thunder and lightning.
" 2....	42.6	29.3	Cloudy.
" 3....	54.5	30.7	Fair; fine night.
" 4....	66.5	33.9	Fair; fine day and night.
" 5....	70.1	32.3	Fair; humming birds; very fine day.
" 6....	62.9	41.7	Cloudy; fine sunset.
" 7....	47.7	33.9	Cloudy; heavy rainfall.
" 8....	62.4	39.8	Cloudy.
" 9....	61.3	35.2	Cloudy.
" 10....	77.0	41.8	Fair; very fine day and night; fine sunset.
" 11....	76.5	38.8	Fair; light rain; fine morning.
" 12....	55.0	43.3	Fair; fine day.
" 13....	66.3	43.3	Fair; fine day.
" 14....	70.4	33.5	Cloudy; fine day and night.
" 15....	74.2	42.2	Fair; fine day and night.
" 16....	66.0	37.0	Cloudy.
" 17....	58.1	45.0	Cloudy; rain; fine evening.
" 18....	59.7	40.2	Fair; very fine day and night.
" 19....	68.2	36.0	Cloudy; heavy thunderstorm; wind.
" 20....	56.9	44.5	Fair; heavy rain; thunder.
" 21....	53.6	38.0	Cloudy; fine night; Bow river very high; wild roses in bloom.
" 22....	61.3	32.0	Fair; fine day and night.
" 23....	58.3	32.0	Cloudy; rain; fine night.
" 24....	68.6	35.0	Fair; very fine day; fine night.
" 25....	74.0	40.5	Fair; very fine day.
" 26....	75.4	40.2	Fair; very fine night.
" 27....	75.0	36.8	Fair; fine day.
" 28....	66.4	41.9	Fair; fine day.
" 29....	66.0	41.0	Fair; fine evening; very fine day.
" 30....	64.7	40.5	Fair; rain; fine afternoon.
July 1....	67.0	42.8	Fair; very fine day and night.
" 2....	63.0	34.5	Fair.
" 3....	63.2	36.0	Fair; light rain; fine morning and night.
" 4....	68.3	36.5	Fair; perfect day; fine night.
" 5....	72.7	34.8	Fair; very fine day and night.
" 6....	70.9	45.5	Cloudy.
" 7....	67.0	52.2	Cloudy; rain during night.
" 8....	69.0	40.8	Fair; fine day.
" 9....	74.7	36.8	Fair; very fine day.
" 10....	70.0	43.5	Fair; very fine day.
" 11....	79.4	39.8	Fair; very fine day and night.
" 12....	84.0	41.2	Fair; very fine day and night.
" 13....	80.0	47.8	Fair; very fine day and fine night; smoky.
" 14....	81.4	46.0	Fair; very fine day; smoky.
" 15....	75.0	52.2	Cloudy; light rain.
" 16....	85.0	44.3	Fair; fine day.
" 17....	84.9	45.9	Fair; light rain; fine day.
" 18....	77.4	46.7	Fair; very fine day.
" 19....	83.4	37.3	Fair; very fine day.
" 20....	84.6	39.0	Fair; very fine day.
" 21....	82.5	41.6	Fair.

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum for day.	Minimum for day.	
1910.	°	°	
July 22....	74·1	49·3	Cloudy.
" 23....	69·5	48·2	Cloudy.
" 24....	67·1	50·8	Fair.
" 25....	72·2	33·9	Fair; perfect day.
" 26....	62·2	44·8	Cloudy, light rain; thunder.
" 27....	73·5	34·3	Fair; perfect day.
" 28....	68·4	40·1	Fair.
" 29....	71·4	44·3	Fair; very fine day; smoky; light rain evening.
" 30....	77·0	41·0	Fair; very fine day but smoky.
" 31....	75·9	43·0	Fair; very fine day but smoky.
Aug. 1....	70·3	36·7	Fair; very fine day but smoky.
" 2....	70·1	39·7	Fair; very fine day and fine night.
" 3....	73·3	39·9	Fair; very fine day; perfect.
" 4....	64·8	40·5	Cloudy; rain; thunder and lightning.
" 5....	45·3	40·1	Cloudy; heavy rain.
" 6....	67·2	41·7	Cloudy; heavy rain.
" 7....	71·2	39·5	Fair.
" 8....	76·1	38·2	Fair; fine day.
" 9....	74·4	42·0	Fair; thunder; rain.
" 10....	72·0	43·5	Fair; fine day; thunder and lightning.
" 11....	72·9	42·3	Fair; thunder; light rain.
" 12....	70·6	40·3	Fair; fine morning.
" 13....	61·3	45·7	Cloudy; rain; thunder and lightning.
" 14....	55·2	43·1	Cloudy; rain.
" 15....	59·0	42·3	Cloudy; rain.
" 16....	54·7	32·2	Cloudy; rain.
" 17....	67·4	32·8	Fair; very fine day.
" 18....	72·5	34·0	Fair; perfect day.
" 19....	76·4	39·5	Fair; perfect day and night.
" 20....	73·6	57·8	Fair; very fine day and night.
" 21....	63·5	41·3	Cloudy.
" 22....	60·2	43·8	Cloudy.
" 23....	39·1	32·8	Cloudy; snow and rain.
" 24....	54·4	26·0	Fair; very fine day.
" 25....	65·2	29·3	Fair; perfect day; fine night.
" 26....	58·1	28·5	Cloudy; fine day.
" 27....	64·4	28·4	Fair; fine day.
" 28....	57·3	33·8	Cloudy; smoky; light rain.
" 29....	55·3	37·9	Cloudy.
" 30....	56·2	38·3	Cloudy; rain.
Sept. 1....	59·4	40·1	Fair; fine day; very fine night.
" 2....	64·6	31·0	Fair; fine morning.
" 3....	54·9	46·7	Cloudy; rain.
" 4....	58·2	42·8	Cloudy.
" 5....	51·2	40·2	Cloudy; rain.
" 6....	45·0	38·2	Cloudy; rain.
" 7....	40·3	32·8	Cloudy; rain and snow.
" 8....	39·7	31·3	Cloudy.
" 9....	56·1	25·0	Fair; fine day.
" 10....	53·3	29·2	Cloudy; rain and snow.
" 11....	48·3	31·2	Cloudy.
" 12....	56·0	24·3	Fair; fine afternoon.
" 13....	60·5	25·2	Fair; perfect day.
" 14....	73·5	26·8	Fair; perfect day; very fine night.
" 15....	72·6	30·8	Fair; very fine day and night; fine sunset.
" 16....	73·0	36·8	Fair; perfect day.
" 17....	70·5	38·9	Fair; fine day; very fine night.
" 18....	72·4	38·8	Fair; perfect day.
" 19....	76·3	35·5	Fair; perfect day; very fine night.
" 20....	77·4	33·9	Fair; perfect day and night.
" 21....	57·3	34·4	Cloudy; rain during night.
" 22....	61·4	38·8	Cloudy.
" 23....	56·1	39·3	Cloudy; rain with snow at night.
" 24....	37·0	28·3	Cloudy; aurora.

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum for day.	Minimum for day.	
1910.	°	°	
Sept. 25 ...	53·2	21·6	Fair.
" 26....	54·4	39·2	Cloudy.
" 27....	58·0	32·3	Fair.
" 28....	53·3	43·5	Cloudy ; rain mostly during night.
" 29....	50·9	39·9	Cloudy ; heavy rain ; light rain during night.
" 30....	48·5	36·4	Cloudy.
Oct. 1 ...	48·0	36·2	Cloudy.
" 2....	46·3	31·0	Cloudy.
" 3....	44·1	34·3	Cloudy ; rain.
" 4....	46·7	33·9	Cloudy.
" 5....	50·7	35·0	Cloudy.
" 6....	49·2	38·7	Cloudy ; rain.
" 7....	49·5	38·3	Cloudy.
" 8 ...	59·9	37·6	Fair ; warm day with warm wind ; fine night.
" 9 ...	59·4	41·8	Cloudy ; rain mostly during night.
" 10....	42·2	34·8	Cloudy ; light rain during night.
" 11....	44·0	34·3	Cloudy.
" 12....	50·1	38·0	Fair.
" 13....	55·1	31·7	Fair ; very fine day.
" 14....	54·5	46·5	Cloudy ; a gale ; fine sunrise.
" 15....	62·5	49·8	Fair ; very fine day ; very fine sunrise and sunset.
" 16....	61·3	32·8	Fair ; very fine sunrise ; very fine day.
" 17....	48·1	35·2	Cloudy ; rain.
" 18....	41·2	32·9	Cloudy ; rain and snow.
" 19....	48·8	24·6	Fair ; very fine day.
" 20....	52·7	34·2	Fair ; very fine sunrise.
" 21....	51·9	30·6	Fair ; fine day and night ; very fine sunrise.
" 22....	48·0	41·4	Cloudy ; fine morning ; fine sunrise.
" 23....	42·3	33·3	Cloudy ; fine day.
" 24....	41·0	32·4	Cloudy ; light rain ; heavier rain during night.
" 25 ...	41·0	31·5	Cloudy.
" 26 ...	32·5	21·0	Fair ; very fine day.
" 27....	36·1	7·7	Fair ; fine day and night ; very fine sunset ; skating on ponds.
" 28 ...	44·1	23·5	Cloudy ; a gale.
" 29....	49·3	37·0	Fair ; a gale.
" 30....	46·8	26·3	Fair ; very fine day.
" 31 ...	42·8	29·3	Fair ; fine day and night ; fine sunrise.
Nov. 1 ...	39·2	21·2	Fair ; shooting stars.
" 2....	43·8	32·8	Cloudy ; rain during night.
" 3....	36·1	27·4	Cloudy.
" 4....	37·0	20·0	Fair ; very fine day.
" 5 ...	38·0	29·7	Cloudy ; snow flurries.
" 6....	37·2	30·8	Cloudy ; rain and snow.
" 7....	44·5	30·8	Cloudy ; rain.
" 8 ...	37·2	28·2	Fair.
" 9....	26·4	20·5	Cloudy ; light snow during night.
" 10....	35·0	20·9	Cloudy.
" 11....	38·3	31·8	Cloudy ; rain and snow.
" 12 ..	34·2	14·6	Fair.
" 13....	30·3	13·5	Fair.
" 14....	34·2	22·1	Cloudy ; fine day ; Bow river frozen partly over ; fine sunrise.
" 15....	32·7	11·6	Fair ; fine day ; fine moonlight night ; very fine sunset ; total eclipse of moon visible.
" 16 ..	29·1	9·6	Fair ; very fine day and night.
" 17 ...	30·7	18·7	Fair ; fine day and moonlight night ; skating on Bow river.
" 18....	27·2	13·3	Cloudy
" 19....	32·7	23·8	Fair ; fine mildish day.
" 20 ...	35·4	25·1	Cloudy.
" 21....	36·8	32·1	Cloudy ; rain and snow.
" 22....	34·7	27·2	Cloudy ; sleighing, but indifferent ; an icy surface on roads, &c.
" 23 ...	32·6	19·4	Cloudy ; snow flurries.
" 24 ...	25·0	9·3	Fair ; fine day.
" 25 ...	12·1	-·8	Fair ; Bow river frozen all over.
" 26....	19·3	0·8	Cloudy ; fine day.

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum for day.	Minimum for day.	
1910.	°	°	
Nov. 27....	18·2	3·4	Cloudy.
" 28....	22·8	5·6	Fair; fine night.
" 29....	16·1	5·7	Cloudy.
" 30....	17·2	8·6	Cloudy; snow flurries; ice on Bow river 9 inches.
Dec. 1....	33·8	15·2	Cloudy; light snow at night.
" 2....	12·9	8·2	Cloudy.
" 3....	13·2	1·8	Fair; snow flurries.
" 4....	34·3	2·2	Cloudy.
" 5....	27·9	6·9	Cloudy; fine sunrise.
" 6....	26·2	11·5	Fair; very fine day.
" 7....	33·7	15·4	Cloudy.
" 8....	32·7	25·2	Cloudy; light snow.
" 9....	27·4	22·3	Cloudy; light snow.
" 10....	22·8	7·9	Fair; fine night; good sleighing on some streets; snow on ground 4½ inches.
" 11....	29·2	5·9	Fair.
" 12....	42·2	24·2	Cloudy; very fine sunrise and sunset; a very fine lunar coronæ; a gale.
" 13....	37·9	30·8	Fair; strong wind; fine night.
" 14....	32·3	18·5	Fair; fine day; very large lunar halo.
" 15....	30·3	18·0	Cloudy.
" 16....	31·2	20·3	Cloudy.
" 17....	29·8	16·0	Fair; fine day and night: snow flurries.
" 18....	35·3	16·0	Fair.
" 19....	27·5	19·6	Fair; very fine day and fine sunset.
" 20....	31·7	19·1	Fair.
" 21....	28·8	20·8	Fair.
" 22....	19·9	6·1	Cloudy.
" 23....	26·1	18·2	Cloudy; snow flurries during night.
" 24....	28·6	21·7	Fair; fine day.
" 25....	30·8	15·8	Cloudy.
" 26....	29·9	25·3	Cloudy; snow during night.
" 27....	21·7	11·2	Cloudy.
" 28....	26·3	11·2	Fair; fine day; sleighing good.
" 29....	28·6	20·1	Cloudy.
" 30....	28·8	13·2	Cloudy; light snow during night.
" 31....	—7·9	—14·5	Cloudy; snow flurries; ice on Bow river about 13 in.
1911.			
Jan. 1....	—12·3	—32·7	Fair.
" 2....	9·1	—23·4	Fair.
" 3....	25·9	6·3	Fair; fine day.
" 4....	33·6	15·0	Cloudy.
" 5....	32·7	28·2	Cloudy.
" 6....	35·7	28·4	Cloudy; light snow during night.
" 7....	29·9	23·2	Cloudy.
" 8....	20·2	—4·2	Cloudy; light snow; heavier snow during night; very stormy.
" 9....	—20·7	—26·0	Cloudy; light snow; very stormy.
" 10....	—30·1	—33·3	Cloudy; light snow; very stormy.
" 11....	—28·4	—32·8	Cloudy; light snow; stormy.
" 12....	—31·0	—36·5	Cloudy; light snow; wind dropped.
" 13....	2·8	—36·5	Fair.
" 14....	5·0	—14·3	Fair; fine day; large lunar halo; snow on ground 9 inches.
" 15....	14·2	—6·3	Fair.
" 16....	20·2	3·2	Fair; fine day.
" 17....	31·0	13·2	Cloudy.
" 18....	9·4	—1·6	Cloudy; light snow; heavier snow during night.
" 19....	25·9	1·2	Cloudy.
" 20....	23·3	8·2	Fair; light snow during night.
" 21....	18·3	—6·6	Cloudy.
" 22....	20·1	10·7	Cloudy; stormy.
" 23....	22·2	17·2	Cloudy; snow flurries.
" 24....	26·2	3·0	Cloudy; light snow during night.
" 25....	—5·0	—18·0	Fair; snow flurries.

MAXIMUM and Minimum Temperatures, &c.—Continued.

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum for day.	Minimum for day.	
1911.	°	°	
Jan 26 ...	-14.8	-24.0	Cloudy; light snow; very stormy morning.
" 27 ...	18.0	-3.2	Cloudy; light snow; heavier snow at night.
" 28 ...	25.8	13.0	Cloudy.
" 29 ...	21.6	5.7	Cloudy.
" 30 ...	30.9	17.0	Cloudy; light snow during night.
" 31 ...	-2.8	-8.2	Cloudy.
Feb. 1 ...	-15.6	-18.1	Cloudy; light snow; strong wind.
" 2 ...	17.2	-27.5	Fair; ice on Bow river as cut about 24 in.
" 3 ...	22.7	12.2	Cloudy.
" 4 ...	24.0	10.9	Cloudy.
" 5 ...	31.3	13.2	Fair.
" 6 ...	25.2	13.6	Fair; fine day.
" 7 ...	23.6	10.8	Cloudy.
" 8 ...	24.1	5.9	Fair; very fine day.
" 9 ...	33.7	16.2	Fair; very fine day and night.
" 10 ...	32.8	17.8	Fair; very fine day and night.
" 11 ...	35.6	12.6	Fair; very fine day; thawing; light snow during night.
" 12 ...	28.3	18.4	Fair; fine day and night.
" 13 ...	27.7	6.9	Cloudy; fine day; many Clarke's nutcrackers about.
" 14 ...	28.3	4.8	Fair.
" 15 ...	20.7	7.0	Cloudy.
" 16 ...	21.7	-8.3	Cloudy.
" 17 ...	25.0	4.7	Fair; fine day.
" 18 ...	24.3	-7.3	Fair; perfect day and fine night.
" 19 ...	24.3	-15.3	Fair; very fine day.
" 20 ...	24.4	14.1	Fair; very fine afternoon.
" 21 ...	32.0	-12.8	Fair; very fine day and night.
" 22 ...	31.3	-8.2	Fair; very fine day and fine night.
" 23 ...	36.2	-4.0	Fair; very fine day.
" 24 ...	27.2	20.4	Cloudy; snow.
" 25 ...	23.0	-2.3	Cloudy.
" 26 ...	18.6	-5.2	Fair; fine afternoon.
" 27 ...	27.0	-8.3	Fair; very fine day.
" 28 ...	36.1	-4.4	Fair; very fine day.
Mar. 1 ...	41.3	5.1	Fair; very fine day; thaw.
" 2 ...	41.0	14.3	Fair; snow during night; fine day; thaw; ice on Bow river, 30 inches thick.
" 3 ...	31.9	20.8	Fair; fine afternoon and night.
" 4 ...	34.9	2.9	Fair; very fine day.
" 5 ...	34.4	5.0	Cloudy.
" 6 ...	40.8	20.5	Cloudy, sleighing becoming bad in places; thaw.
" 7 ...	40.2	30.7	Cloudy; light rain and snow; thaw.
" 8 ...	34.7	27.8	Cloudy.
" 9 ...	34.4	25.7	Cloudy.
" 10 ...	32.6	27.7	Cloudy; snow flurries; light snow during night.
" 11 ...	32.0	21.2	Cloudy.
" 12 ...	39.8	23.3	Fair; fine sunset; a gale.
" 13 ...	42.6	33.8	Cloudy; a full gale; a 96 to 100 miles an hour wind for 5 minutes on Sulphur mountain
" 14 ...	29.9	18.9	Fair; very fine day; wheeled vehicles in use.
" 15 ...	45.6	17.8	Fair; perfect day.
" 16 ...	45.2	22.7	Fair; very fine day.
" 17 ...	43.8	14.5	Fair; fine day; fine sunset.
" 18 ...	47.6	29.9	Fair; very fine day; fine night; fine sunset.
" 19 ...	50.0	38.5	Fair; very fine day; aurora.
" 20 ...	49.4	36.9	Fair; very fine day; robins and mountain bluebirds.
" 21 ...	37.0	28.8	Fair.
" 22 ...	52.1	26.3	Fair; very fine day; Bow river opening.
" 23 ...	50.0	29.4	Cloudy; light rain; aspens budding; Juncos.
" 24 ...	35.4	29.5	Cloudy; snow flurries; fine sunrise.
" 25 ...	34.8	23.2	Cloudy; town roads drying.
" 26 ...	36.7	13.1	Fair.
" 27 ...	38.2	24.0	Fair; fine day.
" 28 ...	44.2	31.8	Cloudy; a gale; thawing.
" 29 ...	48.0	36.6	Cloudy.
" 30 ...	42.1	28.3	Cloudy; light snow during night; duck on river; water ousels.
" 31 ...	31.1	21.7	Cloudy; light snow during night; chipping sparrows.

N. B. SANSON,

Observer.

VISITORS AT THE PARK.

ANALYSIS OF NATIONALITIES OF VISITORS TO BANFF SPRINGS AND HOTELS.

Number of visitors at the Upper Hot Springs from April 1, 1910, to March 31, 1911:—

Canada.. . . .	14,223
United States.. . . .	1,064
England.. . . .	86
Scotland.. . . .	27
Ireland.. . . .	14
Australia.. . . .	33
South Africa.. . . .	6
Germany.. . . .	9
China.. . . .	4
Denmark.. . . .	9
Ceylon.. . . .	1
South America.. . . .	1
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Total.. . . .	15,477

Caretaker's report giving number of visitors and bathers, cave and basin, April 1, 1910, to March 31, 1911:—

Canada.. . . .	5,020
England.. . . .	454
Scotland.. . . .	230
Ireland.. . . .	40
New Zealand.. . . .	60
Australia.. . . .	25
South Africa.. . . .	12
India.. . . .	9
Ceylon.. . . .	2
Samoa.. . . .	1
Honolulu.. . . .	3
Fiji Islands.. . . .	2
United States.. . . .	8,487
Mexico.. . . .	5
China.. . . .	21
Japan.. . . .	19
France.. . . .	13
Germany.. . . .	15
Sweden.. . . .	17
Switzerland.. . . .	13
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Visitors.. . . .	14,448
Bathers.. . . .	14,084
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Total.. . . .	28,532

Guests registered at the Sanitarium Hotel, Banff, from April 1, 1910, to March 31, 1911:—

Canada.. . . .	5,113
United States.. . . .	2,208
England.. . . .	404
Scotland.. . . .	198
New Zealand.. . . .	121
China.. . . .	11
South Africa.. . . .	43
Australia.. . . .	80
Honolulu.. . . .	3
Japan.. . . .	18
Ireland.. . . .	142
Denmark.. . . .	8
India.. . . .	2
Holland.. . . .	13
Germany.. . . .	43
Chili.. . . .	6
Italy.. . . .	25
Switzerland.. . . .	69
France.. . . .	61
Austria.. . . .	17
Philippine Islands.. . . .	12
Mexico.. . . .	6
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Total.. . . .	8,603

Number of visitors registered at the King Edward Hotel from April 1, 1910, to March 31, 1911:—

Canada.. . . .	4,263
United States.. . . .	3,567
England.. . . .	100
Scotland.. . . .	28
Ireland.. . . .	19
Switzerland.. . . .	2
New Zealand.. . . .	18
Australia.. . . .	4
South Africa.. . . .	5
Japan.. . . .	4
India.. . . .	1
Germany.. . . .	12
Austria.. . . .	3
China.. . . .	9
Norway.. . . .	10
France.. . . .	20
Italy.. . . .	10
Egypt.. . . .	1
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Total.. . . .	8,079

Number of visitors registered at the Alberta Hotel from April 1, 1910, to March 31, 1911:—

Canada.. . . .	4,310
United States.. . . .	1,702
England.. . . .	275
Scotland.. . . .	232
Ireland.. . . .	140
Sweden.. . . .	26
New Zealand.. . . .	68
Australia.. . . .	10
China.. . . .	30
France.. . . .	4
Germany.. . . .	10
Total.. . . .	6,807

Number of visitors registered at the Grand View Villa, April 1, 1910, to March 31, 1911:—

Canada.. . . .	3,400
United States.. . . .	685
England.. . . .	142
Japan.. . . .	1
Ireland.. . . .	68
China.. . . .	6
Scotland.. . . .	74
Australia.. . . .	45
France.. . . .	32
Holland.. . . .	4
New Zealand.. . . .	40
Austria.. . . .	5
Mexico.. . . .	3
Total.. . . .	4,505

Number of visitors registered at the Hot Springs Hydropathic Hotel from April 1, 1910, to March 31, 1911:—

Canada.. . . .	1,200
United States.. . . .	410
England.. . . .	74
Scotland.. . . .	100
New Zealand.. . . .	30
Germany.. . . .	28
Australia.. . . .	60
Ireland.. . . .	80
Austria.. . . .	18
Total.. . . .	2,000

Visitors registered at the Lake Louise Chalet from April 1, 1910, to March 31, 1911:—

Canada.. . . .	2,508
United States.. . . .	5,896
England.. . . .	461
Scotland.. . . .	65
Ireland.. . . .	13

Japan..	7
Russia..	2
France..	27
Cuba..	1
Australia..	106
India..	24
Holland..	5
China..	12
New Zealand..	35
Honolulu..	26
Denmark..	1
Germany..	16
South America..	2
Switzerland..	3
Italy..	6
Africa..	7
Austria-Hungary..	4
Belgium..	3
Mexico..	1
Norway..	1
Spain..	1
Unlocated..	154
Total..	9,387

Number of visitors registered at the Park Hotel during the months of July, August and September, 1910. Closed remainder of year:—

Canada..	480
United States..	92
Total..	572

Number of visitors at the Homestead, (Temperance House,) from April 1, 1910, to March 31, 1911:—

Total..	520
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N.B.—Note of nationalities not available.

Number of visitors registered at the Mount Royal Hotel from May 15, 1910, to September 30, 1910. Closed remainder of the year:—

As the hotel is closed at this time we are unable to secure the registers but I have been advised by the best authority that there were a great many more people accommodated than during the previous season and although I am sure the increase was more than five hundred I have added this to the last year's report which would make a total of 6,963.

SUMMARY.

Sanitarium..	8,603
King Edward Hotel..	8,076
Alberta Hotel..	6,807
Grand View Villa..	4,505
Hot Springs Hydropathic Hotel..	2,000
Lake Louise Chalet..	9,387
Banff Springs Hotel..	9,961
Park Hotel..	572

Homestead (Temperance)	520
Mount Royal Hotel	6,963
Summer cottagers	2,100
Estimated excursionists not registered	4,000
Total	63,494
Season 1910-11	63,494
Season 1909-10	56,452
Increase	7,042

No. 3.

REPORT OF THE SUPERINTENDENT OF YOHO AND GLACIER PARKS.

FIELD, B.C., March 31, 1911.

HOWARD DOUGLAS, Esq.,
Commissioner of Dominion Parks,
Edmonton, Alberta.

SIR,—I have the honour to submit herewith my second annual report as superintendent of the Yoho and Glacier Parks for the fiscal year ending March 31, 1911.

YOHO PARK.

During the month of May last, balm of gilead trees were planted twelve feet apart on the south side of Kicking Horse avenue, in the townsite of Field, from the eastern corner of block 1 to the western corner of lot 4 in block 2; on the east side of First street east from Kicking Horse to First avenue; on the south side of First avenue from the eastern corner of lot 3, in block 4, to Centre street; on the north side of First avenue from First street east to Centre street. I am pleased to say that this has done much to beautify the townsite, and has also encouraged the residents to pay more attention to the beauty of their lawns and homes in general.

A lease has now been issued (excluding block 3) to every property holder who has complied with the building conditions with the exception of three who have thus far been unable to produce the necessary evidence of ownership. Those who have received their leases have expressed themselves as being well satisfied with the rental and other conditions.

A small amount of clearing and grading was done on First street west for the convenience of the people who built cottages in this vicinity during the summer of 1909. Some gravelling also was done on the east end of Kicking Horse avenue.

Owing to the unusual number of snow and mud slides during the spring of 1910 much work was rendered necessary in the way of general repairs. No less than three slides crossed the Emerald lake drive, through two of which a driveway had to be made and much dead timber and rock removed. On the Yoho drive I also made a passage through three snow slides of considerable size; and another, in the neighbourhood of thirty feet deep and two hundred yards long, was partially left to gradually melt away, although passage over it was sometimes precarious.

Close to twelve miles of trail were repaired during the year; the fallen timber being removed as well as the boulders left by mud and snow slides. Six miles of new trail were constructed in the southern portion of the park, from the Kootenay trail to Fish lake, affording the sightseer a chance to try his luck with fly or minnow.

PLATE XIV.



Entrance to Yoho Valley, showing portion of Government road, Yoho Park, B.C.

The work of clearing up the dead timber in close proximity to the drives was continued this year. The natural bridge drive was entirely cleared of fallen timber within thirty feet of each side, and the Emerald lake drive, from a point within a half mile of Field, where I suspended work last year, to within a few hundred feet of the junction of the Emerald lake and natural bridge drives, was treated in the same manner. On the Yoho drive progress in this respect was slower, the timber being heavier; so we were only able to add approximately half a mile to last year's work.

Three dozen rustic seats were constructed and placed at different points on the Emerald lake and Yoho drives where the scenery appeared most grand.

PLATE XVI.



Natural Bridge, near Field, B.C., Yoho Park.

PLATE XV.



Cathedral Peak from road to Takkakaw Falls, Yoho Park, B.C.

A diversion in the Yoho drive, a distance of one mile, was completed through heavy timber and rock. I would mention particularly a portion of this diversion, a length of twelve hundred feet situated on the sloping bank of the Yoho river, which was almost entirely rock work. This was constructed in a little less than four weeks with a gang of men at no time exceeding twenty-five in number.

Considerable repair work will be necessary on this piece of road each spring, for a few years at least, as the clay and rock from the embankment above will be almost sure to keep sliding down until the slope becomes more gradual. This practically completes the Yoho carriage road from Field to the foot of the Takakkaw Falls, a distance of twelve and a half miles, and, after the general repair work has been done this spring, one will be able to make this trip from Field and return in from three to four hours.

It was not unusual last year to see from thirty to fifty people studying the beauties of the valley from the end of the carriage road, which speaks well for its future when its rare scenic worth becomes more widely known.

PLATE XVII.



Mount Fay, on Interprovincial Boundary, Rocky Mountains and Yoho Parks.

A drive road was constructed during the months of May and June 1910, from the Emerald lake drive to the natural bridge, a distance of approximately one mile. Needless to say, few people who visit Field now go away without first taking this short and pleasant drive to see the world-famed 'Natural Bridge.' With your approval it is my intention to this year complete a return carriage road from the natural bridge to connect with the Emerald lake drive near Emerald creek, in the neighbourhood of a mile and a half from Emerald lake. This will enable the tourist to see the natural bridge without traversing the same road twice, or, in other words, they will be able to go to Emerald lake via the natural bridge and return via the Emerald lake road or vice versa. I will also connect the Yoho drive with the old

grade of the Canadian Pacific railway from Field to Hector, as well as extend the former to a point in view of the Twin Falls, a distance of four miles.

It has been officially announced that the Alpine Club of Canada will hold their sixth annual camp in the meadows above Sherbrooke lake. In this connection I would respectfully suggest that a trail be built from Hector station to the point mentioned, a distance of two and a half miles. This trail would not only be used by the Alpine Club, but, I am sure, would become a popular route for tourists.

The most material of the recommendations I have to make in this report is that of providing proper drainage in the townsite of Field, and necessarily, if this be done, a water service for fire protection and for domestic use. The drainage system might, however, be established in connection with the water service of the Canadian Pacific

PLATE XVIII.

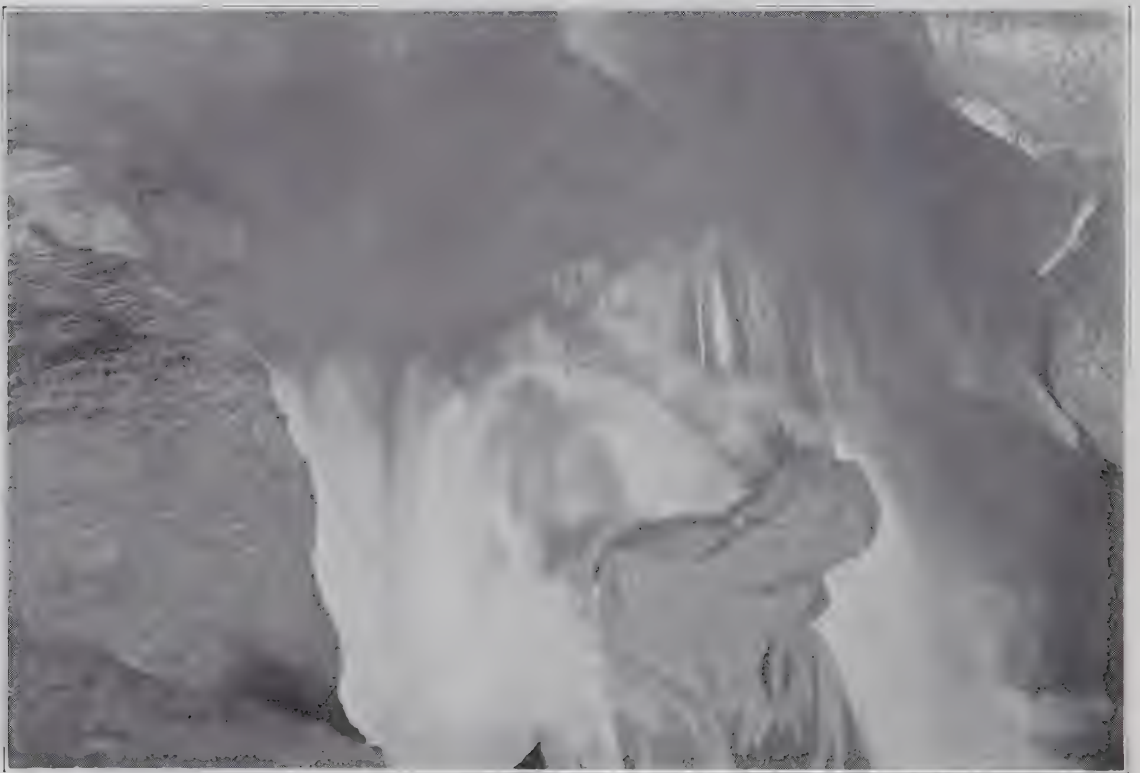


Photo A. O. W.

Selkirk Caves, B.C.—The "Falls of Avernus", seen from entrance at Gopher Bridge,
Glacier Park, B.C.

Railway Company. It is essential that some system of drainage be provided in Field if it is to become worthy of its situation, the 'Gateway' to the beautiful Yoho valley.

GLACIER PARK.

The trail from Nakimu caves over the summit between Hermit range and Mount Cheops and down Bear creek to Rogers pass, on the line of the Canadian Pacific Railway, was completed; so that it is now possible to make the round trip

from the Glacier House to the caves and return via Rogers pass, a distance of fifteen miles.

Some repair work was done at the Caves, but progress was not what it should have been, on account of high water, which rendered it impossible to make any extensive improvements to the main entrance.

With your approval it is my intention to construct this year a drive road from the Glacier House to the Cougar valley. It is my ambition to get within walking distance of the caves, a distance of five miles, this year providing we do not encounter any great amount of rock work.

PLATE XIX.



Photo A. O. W.

Selkirk Caves—Ayres Peak in the Auditorium Passageway, Glacier Park, B.C.

In conclusion I desire to acknowledge the faithful work done by the foremen who worked under my direction during the last year.

I have the honour to be, sir,

Your obedient servant,

G. E. HUNTER,

Superintendent.

No. 4.

REPORT OF THE SUPERINTENDENT OF JASPER PARK.

STRATHCONA, ALBERTA, April 1, 1911.

HOWARD DOUGLAS, Esq.,
Commissioner of Dominion Parks,
Edmonton, Alberta.

SIR,—I beg to submit herewith my first annual report as Acting Superintendent of Jasper Park for the fiscal year ending March 31, 1911.

At the time I was placed in charge of this work Jasper Park was entirely new and undeveloped. The line of the Grand Trunk Pacific was located, crossing the park from east to west, but work on contract had not been started.

There were at that time seven squatters located along the Athabaska river within the boundaries of the park, six of whom have since been settled with by various sums paid for improvements, amounting to \$5,025. They have all removed outside of the park. I am pleased to say that settlement was reached with these squatters by mutual agreement between myself and them, on February 19, 1910, and all have carried out the terms of agreement very satisfactorily and seem to be satisfied with the treatment received from the department. There is still one squatter occupying land in the park, namely, L. J. Swift, who has refused offers of settlement so far.

When work started on construction of the Grand Trunk Pacific it was found necessary that stopping places should be established at suitable points in the park to accommodate the travelling public, and with this end in view there have been eight places allowed, with restaurant, sleeping and stable accommodation, there being room for eight hundred teams in these places during the past winter.

Three blacksmith shops, three general stores, one butcher and one veterinary license have also been issued. This, with railway construction camps, has given ample accommodation for freighters and travellers. Due care has been taken in the selection of those obtaining permits, and business has only been allowed where absolutely necessary. It has been my endeavour to keep out any questionable business or gambling places. This was, of course, in keeping with the park regulations.

Considerable work has been done on the line of the Grand Trunk Pacific during the year. The right-of-way has been cut and burned, and grading is well under way there being some sixty miles of railway in the park.

The contractors, Messrs. Foley, Welsh & Stewart, have built a wagon road through the park along the railway, part of which runs through some of the best mountain scenery in the park, making it very easy and pleasant travelling for tourists and others coming west this season.

We have had two game guardians, who were also fire rangers, working in the park during the past year, and have erected buildings at mile 113 on the Grand Trunk Pacific with stable accommodation for four horses, and house 16 x 18 suitable for a fire ranger or game guardian for the present. Steps have also been taken to secure buildings at mile 85.

We have been able during the year to open a pack trail leading from the Grand Trunk Pacific at mile 85 to the Hot Springs, a distance of about fourteen miles. This makes travelling to the Hot Springs very much easier than by the old trail. Steps have been taken to locate a wagon road to the Hot Springs, but as this is very important work and there seem to be two possible routes, both of which would be rather expensive, I am not in a position to recommend either. I beg to say, however, that a road can be built from mile 85 near the coal mine, crossing country to Fiddle

PLATE XX.



Lower Falls at Mile 85, on Pack Trail to Hot Springs, Jasper Park.

creek and up the creek valley to the springs. This road would be longer but would cost less. The other route might start from the railway near Fiddle creek following the sides of the valley, some of which would have to be cut into the sides of the mountains, and would have some pretty bad grades to contend with, and would be very expensive, but this road would lead through some very fine mountain scenery and would pass near the now celebrated lower Fiddle creek canyon which, to my mind, would justify any extra expenditure needed to complete the road. This work, however, would need to be looked over by a competent engineer before being undertaken.

I may say that during the past year some very fine canyons, lakes and waterfalls have been discovered which, with the hot springs, sulphur springs and other attractions known to exist, stamp Jasper Park already as one of the greatest of the Canadian Parks. And since it is as yet almost entirely unexplored, and since its known scenic features combine mountains, lakes, rivers and waterfalls, intermingled in such a way that its beauty is beyond the power of pen to describe, its future possibilities seem limitless.

PLATE XXI.



Fiddle Creek Canyon, Jasper Park.

There were quite a number of wild animals seen during the past year, consisting of mountain sheep, goats, deer, bear, beaver, otter, marten and fox, some of which seem quite tame.

Fish, consisting of mountain and rainbow trout, jackfish and whitefish, were reported plentiful in the lakes and creeks during the summer season.

Game guardians have sealed all firearms in the park so far as known, and I am pleased to say that very few reports have been received of infractions of the game regulations.

We have been very fortunate in the matter of fires, there being only one place in the park where fire got away from the right-of-way while burning was being done, and it only burned over about five acres of scrub timber.

There seems to be a considerable area of coal-bearing lands on both sides of the railway on the eastern slope of the mountains, some of which is being developed at mile 85, Grand Trunk Pacific west of Fiddle creek, by the Jasper Park Collieries Company.

There are also graphite claims being developed near mile 126, and limestone quarries located near mile 110.

I am pleased to note that the winter season seems to be more moderate than farther east, owing to prevailing west winds. There was very little snow during the past winter; indeed, I might say that the freighters have used wagons all winter, and government pack horses, running out in the park, have wintered fairly well without feed or care.

I am pleased to say that I have found railway contractors, Grand Trunk Pacific engineers, coal miners and the general public very careful in regard to park and game regulations; also in the matter of fires, and I wish to state that the game guardians, fire rangers and myself have received very substantial help in many ways from contractors, engineers, miners, Royal Northwest Mounted Police and others during the year.

I also wish to say that the game guardians and fire rangers have been very faithful in the discharge of the work assigned to them, which, owing to the unorganized state of the park and the great number of people engaged in railway work, has been somewhat difficult at times.

I also wish to express the appreciation I feel for the able support received from yourself and all officials in connection with the park and forestry branch during the past year and hope the department may take up the matter of developing and improving what nature has already done to make this the great pleasure ground of Canada.

Your obedient servant,

J. W. McLAGGAN,

Acting Superintendent of Jasper Park.

No. 5.

REPORT OF THE SUPERINTENDENT OF BUFFALO PARK.

WAINWRIGHT, ALBERTA, April 1, 1911.

HOWARD DOUGLAS, Esq.,
Commissioner of Dominion Parks,
Edmonton, Alberta.

SIR,—I have the honour to submit my first annual report as Superintendent of Buffalo Park for the fiscal year ending March 31, 1911.

Due to the exceptionally fine weather prevailing in the early spring of last year, I was enabled to have the grounds around the park headquarters all cleaned up, besides having the brush cut and burned off the drive-way which leads from the park to the superintendent's house and which continues on towards the town of Wainwright. As soon as the frost was out sufficiently to allow the ground to be ploughed, this road was graded the entire distance, about a mile and a quarter.



Buffalo in Buffalo Park, near Wainwright, Alta.

In the early part of the summer we procured about 3,000 evergreen trees along the Grand Trunk Pacific west of Edmonton, which we set out around the grounds and along each side of the drive-way leading to the park. These trees have done very well, but it was found necessary to have the grounds and drive-way fenced to prevent the stock from damaging them.

The buildings at headquarters and at the park entrance were all painted, which has materially improved their appearance.

During the latter part of June and the month of July, the fire-guards around and across the park, which were broken in 1908-09 were all back-set, and a new guard, twenty feet in width, broken around the entire park on the inside of the fence, also

PLATE YXIII.



Photo J. H. Gano.

Hay-making in Buffalo Park, near Wainwright, Alta.

a number of other shorter guards to better protect the winter feed grounds and stack-yards, which makes now about 170 miles of guard, twenty feet in width, which, to keep in proper shape, will have to be thoroughly worked up each year. When you consider that it takes three widths of a four-horse disc to make the width of the guard, and that it requires three cuts or more to properly cultivate the ground, you will realize that it means travelling 510 miles to cover the ground once, or about 1,600 miles to complete the job. As this work should be done during the last half of June and the first part of July, to get the best results, it would take three four-horse outfits, making eighteen miles a day each, to complete the work in the proper time, and as these teams would have to camp right on the job it would require another team to move camp and supplies.

Owing to the mild winter of 1909-10, the buffalo were able to range out nearly all through it, consequently we carried over more than a thousand tons of hay. Having more on our meadows than we required this year, I was able to let it out on shares, which gave us about 250 tons without any cost whatever to the department.

Our hay meadows being of a muskeggy nature, it was found necessary to drain them so as to get the hay off in the proper season. Last fall I had several ditches put in, which will carry off all the surplus water. By putting in a few head-gates in these ditches we can, in dry seasons, easily irrigate the whole meadow.

Putting in these ditches made it necessary to build a number of small bridges, which was done last fall.

This spring, it is my intention (subject to your approval) to have a cottage erected for the men at the winter quarters, also a new stable for the horses, as the present accommodations are entirely inadequate.

PLATE XXIV.



Making Hay in Buffalo Park, near Wainwright, Alta.

Before another winter sets in we should improve on our system of watering the buffalo; at present we have to keep holes open in the lakes, which, as the ice thickens makes it very hard to maintain a supply for the animals. I would suggest that at each of the winter feeding grounds, we sink a well and erect a wind-mill for this purpose.

The telephone installed last year, between the superintendent's house and the winter quarters, has proved a great convenience, having saved us many a long ride. I would suggest that we extend this line to connect with the gate at the south entrance to the park, which would better enable us to keep track of parties going through the park.

ANIMALS IN THE PARK.

With the several shipments of buffalo from Montana and elsewhere and the natural increase since coming to the park, there are now over 800 head in the herd, all of which are in a healthy thriving condition and may be seen at any time during the summer, in half a day's ride from Wainwright, roaming amongst the bluffs, following out the old trails made by their ancestors many years ago, or quietly reposing

in some wallow, the land-marks of the vast herds that roamed these parts in days gone by.

Before winter sets in we throw our gates into the winter-quarters open, and without any extra help, we gradually and quietly drift the various herds in, till there are none left in the main park but a few old stragglers that have been driven out of the herd. These are gathered in later, with no inconsiderable trouble and sometimes danger to the riders.

As you are well aware, there are quite a number of these old bulls; and as there is a possibility of an increase in the herd of from 200 up each year, you will see the necessity of making an early start to dispose of the surplus males.

I would suggest that about the end of December, when they are in their best fur, a number of these bulls be killed off, the killing to be done by the superintendent or under his direct supervision.

This year we were able to secure a number of elk and young moose which gives us the nucleus of a fine herd in each of these species. As these animals are very dangerous at certain seasons of the year, I think it would be advisable to lay out and fence a separate inclosure, where visitors to the park may see them without driving amongst them. We also secured a number of young antelope, but have had very poor success in raising them, only three being left alive. The deer inclosed in the park when the fence was built have evidently done very well. Though we have not got an accurate account of them, we have seen several fawns during the fall.

The animals now in the park are as follows:—

Buffalo, 809; increase 110, loss 7; elk, 7; moose, 11; deer, estimated, 35; antelope, 3. (Since time of writing 3 more have been transferred from Banff.)

VISITORS TO THE PARK.

Though it was not till July 1 last, that the Grand Trunk Pacific put on a through passenger service, the number of visitors to the park has exceeded all expectation. The diary kept by the gate-keeper shows that about 1,800 visitors passed through the gate since April 1, 1910, among them being some well known tourists. One of these, a prominent member of the American Bison Society, after spending a day in the park, remarked that it was the best day he ever put in. Leaving Wainwright in the morning on a small pony, he rode about 35 miles and returned in time to catch the afternoon train. On his trip through the park he saw about 400 of the buffalo, besides the elk, moose, antelope and a few of the deer, to say nothing of the thousands of ducks and chickens, which abound in the park. By a strict enforcement of the park regulations, the park will in time become a great breeding ground for the feathered game of the prairies, as those within its confines already appear to know they are protected.

In the not very distant future, when the prairie chicken has disappeared from other parts, the Buffalo park and the country immediately surrounding it will be the only place in the province where these birds will be found.

In conclusion, I may state that I have, since assuming charge here, been exceedingly careful in expending the money intrusted to me and that I have at all times endeavoured to get full value for every dollar expended.

I am, sir,

Your obedient servant,

EDWARD ELLIS,

Superintendent.

No. 6.

REPORT OF THE SUPERINTENDENT OF ELK ISLAND PARK.

ELK ISLAND PARK, ALBERTA, April 1, 1911.

The Commissioner of Dominion Parks,
Edmonton, Alberta.

SIR,—I beg to submit my first annual report as Superintendent of Elk Island Park, for the fiscal year ending March 31, 1911.

The animals in the park are in fine condition. We have forty-eight buffalo altogether. The increase for the year was six, and there were no losses. Judging by the tracks this winter there has been a very large increase in elk and deer, and we know there are five fine moose in the park, two of which were put in last summer (two-year olds); also one fine two-year old female elk was put in last fall.

During the year, visitors to the park numbered 1,128. During the summer it seems to be a favourite place to spend Sunday, large numbers driving from Fort Saskatchewan and Lamont. Some automobile trips were made from Edmonton, but as the roads are not very good in some sections near the park, few automobilists care to go over them.

Last spring, fire got into the park and killed some young timber, and so to protect the fence, we had the brush cut and burned twenty feet in width on both sides of the fence all the way round, a total distance of sixteen miles.

This winter, we had nine hundred tamarack posts cut and delivered, also four tons of wire for the purpose of building, as soon as the spring opens up, a fence across the park in order to keep the buffalo on the open land, where visitors will have a chance to see them at any time.

There is excellent pasturage in the park. All the hay for winter feed for the buffalo was cut inside the park.

The number of animals in the park on March 31, 1911, is as follows:—

Buffalo.	48
Elk.	28
Deer.	30
Moose.	5

111

Your obedient servant,

ARCH. COXFORD,

Superintendent

No. 7.

REPORT OF THE SUPERINTENDENT OF WATERTON LAKES PARK

WATERTON MILLS, ALBERTA, March 23, 1911.

HOWARD DOUGLAS, Esq.,
 Commissioner of Dominion Parks,
 Edmonton, Alberta.

SIR,—I have the honour to submit herewith my first annual report on matters pertaining to the Waterton Lakes Park.

This portion of the Rocky Mountains is one of particular interest. The foot hills covered with wild flowers, the rivers cold and clear, the deep blue lakes and the great back-ground of the high mountains form a most attractive landscape.

The southern boundary is six miles along the International line and joining the United States Glacier Park. It is nine miles long, making fifty-four square miles. The greater portion of this area is mountainous. There is about fifteen square miles of grazing land.

There are three lakes all connected. The upper one is about eight miles long by two miles wide. It is three hundred feet deep. The second lake is about three miles long and a mile wide and sixty feet deep. The lower one is one mile and a quarter long and twenty-five feet deep. About one half of the largest lake is in the United States Glacier Park. From the lower lake flows the Waterton river through the park.

A survey was made in November last and one hundred and fifty lots, each 75 x 150 feet, were laid out in the most desirable places for villa residences. A large number have already been applied for.

There were about two thousand visitors last summer, five hundred of whom were non-residents.

This vicinity is noted for its large sheep and goat. Game has perceptibly increased in the last few years, and I might add that in order to insure its preservation and also the enforcement of the park regulations and assistance in case of fires, the engagement of an assistant to the forest ranger now employed is a matter for your consideration.

The employment of licensed park guides, who would be required to act as game and fire guardians, is recommended.

A portion of the park is in the Kootenay pass, a highway that has been used by the mountain Indians for many years. There is a rough wagon road into British Columbia and Montana. The pass is about sixty-five miles long, with an elevation of 7,100 feet at the watershed.

Some years ago an Indian found a petroleum seepage on Cameron Falls creek. In 1901, The Rocky Mountain Development Company sank several test holes. More or less oil was found at various depths. At 1,020 feet a good pumping well was struck. The Pincher Creek Oil Company are drilling there now. The Western Oil Company sank some holes next the Waterton lake on Cameron Falls creek and obtained some oil. They also put up some buildings on the upper end of the lower lake. Work here has been discontinued and the houses abandoned for some time. There is float copper on most of the mountains and two known ledges, one of which has been worked. Float coal is found on the lake shores. It is of the best quality.



Waterton Lakes Park Oil Creek Falls.

Last November there was a good horse trail cut out from Cameron Falls on the west side of the upper lake to the United States boundary line, so that visitors could ride to the wagon road in Glacier Park and proper patrols be made by the forest ranger.

FUTURE REQUIREMENTS.

In view of the probable greater influx of tourists I might suggest that a horse trail be made on the east side of the middle and upper lakes, as it is now impossible to patrol to the United States boundary by land in that direction; also a trail to Spirit lake, a beautiful spot hidden in the high mountains. Indeed, good roads are much needed here.

I would call your attention to the fact that there is no bridge on the Waterton river for forty miles, although there are three on the Belly river in the same distance. The high water lasts from six weeks to two months, during which time the Waterton is unfordable and men and teams have been drowned here from time to time. There can be no communication between shores except by row boat, and stock have to swim.

It seems to be advisable to greatly enlarge this park. Many people here desire it. I inclose a map of the proposed extension. It might be well to have a preserve and breeding ground in conjunction with the United States Glacier Park. I am sure this step would be much appreciated by all sportsmen and nature lovers.

During the last winter there were over 15,000 cattle and about 100 horses which drifted up here for shelter. This occurs to a greater or less extent every winter and even in the summer there is always a large number of range stock here. They eat all the grass and ruin the little hay and feed there is here. They are a menace to people, and women and children are in danger. It is impossible to keep them out except by a strong fence of, say, four double barbed wires. It would take about ten miles of fencing to close up the whole park. A fire guard could be ploughed on each side of the fence on the prairie.

I would also beg to remind you that the boundary lines are unsurveyed. There are no lines, pillars or any guide except on the south side of the International boundary line.

In conclusion, I may say that I know of very few places where an outing, fishing and boating, &c., can be had with more pleasure than in this park.

I am, sir,

Your obedient servant,

JOHN GEORGE BROWN,

Forest Ranger, in charge of Park.

No. 8.

REPORT ON THE ST. LAWRENCE ISLAND PARKS.

DEPARTMENT OF THE INTERIOR, FORESTRY BRANCH,

OTTAWA, June 1, 1911.

R. H. CAMPBELL, Esq.,

Dominion Superintendent of Forestry,

Ottawa.

SIR,—I beg to submit herewith my annual report in connection with the islands in the St. Lawrence river, under the administration of the Forestry Branch.

The St. Lawrence Island parks consists of twelve islands lying between Brockville and Gananoque in the St. Lawrence river. With the exception of one, they were purchased from the Mississagua Indians of Alnwick by the government and

PLATE XXVI.



Photo by F. H. B.

View from Aubry Island, Ont., looking towards Gananoque, St. Lawrence Island Parks.

placed under the Dominion Parks Division of the Forestry Branch for administration as public pleasure grounds.

In purchasing these islands and devoting them to their present use, the government was actuated by the consideration that the Thousand Islands were rapidly

passing into private ownership and that it was desirable to reserve a number of them for the use of excursion, pic-nic and fishing parties and the public generally. That this policy has met with the approval of the public is evidenced by the large numbers of persons resorting to the islands.

A progressive policy has been adopted in administering these island parks. On most of them attractively designed pavilions have been erected and painted in appropriate colours; open-air stoves, tables, benches, garbage cans and out-closets have been liberally provided. In order to furnish safe and convenient landing, steamboat and skiff wharfs have been constructed in the most favourable locations, and by these means, many fair-sized boats bring Sunday school excursions from various points on the river and find convenient access to the islands.

PLATE XXVII.



Photo by F. H. B.

Pavilion on Gordon Island, near Gananoque, Ont., St. Lawrence Island Parks.

Under your instructions, I have made three trips of inspection during the past three years and have devoted particular attention to the work of bringing the equipment of the islands up to the standard decided upon. That standard has not yet been reached, but progress is being made, and sufficient has been done to call forth much appreciative comment, and to make the islands already popular as places of public pleasure resort.

During the past year a pavilion was erected on Aubrey island, near Gananoque, and is already equipped for use. A skiff landing will be constructed this season and possibly a wharf in the near future, if the traffic demands it. A new pavilion was also built and equipment provided on the western end of Stovin island, near Brockville, where the number of visitors is particularly large.

The guardians of the parks on Stovin, Mallorytown and Grenadier islands, who are recent appointees, are: Messrs. Omar Truesdell, Martin E. Guild and Fred. Edgley, respectively; and Mr. J. B. MacKenzie, of Gananoque, who succeeds the late Mr. O. V. Goulette, has charge of the islands in the vicinity of Gananoque. These guardians have been visited and many details of labour in the way of maintenance of the present equipment and the clearing and improvement of the grounds arranged for.

PLATE XXVIII.



Photo F. H. B.

Wharf and Pavilion, Stovin Island near Brockville, Ont, St. Lawrence Island Parks.

The photographs herewith but faintly suggest the restful beauties of many of these island parks and the charm of the neighbouring islands as viewed across the broad stretches of waters of the historic St. Lawrence.

Your obedient servant,

FRED. H. BYSHE.



Govt. pavilion on Beau Rivage Island near Gananoque, Ont, St. Lawrence Island Parks.

Photo by F. H. B.



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View from Beau Rivage Island, looking toward Gananoque, Ont, St. Lawrence Island Parks.

Photo by F. H. B.

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DEPARTMENT OF THE INTERIOR
DOMINION OF CANADA

REPORT

OF THE

COMMISSIONER OF DOMINION PARKS

FOR THE

YEAR ENDING MARCH 31

1913

1170/12

PART V. ANNUAL REPORT, 1913

OTTAWA
GOVERNMENT PRINTING BUREAU
1914



Photo by John Woodruff.

Reflection of Mt. Rundle in Vermilion Lakes, Banff.

Canada. National Parks Bureau

DEPARTMENT OF THE INTERIOR

DOMINION OF CANADA.

5th.

Annual REPORT

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DOMINION PARKS

REPORT OF THE COMMISSIONER OF DOMINION PARKS.

DOMINION PARKS BRANCH,
OTTAWA, September 30, 1913.

W. W. CORY, Esq., C.M.G.,
Deputy Minister of the Interior.

SIR,—I beg to submit my (second) annual report as Commissioner of Dominion Parks, covering the fiscal year 1912-13. Appended to it are reports from the Chief Superintendent of Dominion Parks and from the Superintendents of the various Parks. These reports show in detail the substantial progress made during the year in the matter of development work. My own report, therefore, is confined largely to a statement concerning the purposes served by National Parks and the useful development work that such purposes suggest.

CANADA'S PARKS.

Extract from an address delivered at Ottawa, March 12, 1913, by His Royal Highness, the Duke of Connaught, before the Canadian Association for the Prevention of Tuberculosis:—

‘I feel that some apology is necessary for referring to the subject on which I now desire to touch, but the fact that this is the last opportunity I shall have for public speaking before I go to England on leave must be my excuse. Also, the subject is allied with public health, which is one more reason for me to request your indulgence.

‘I desire to refer shortly to the question of your Dominion Parks. I do not think that Canada realizes what an asset the nation possesses in the parks. These areas have been preserved from the vandal hand of the builder for the use and enjoyment of the public, who may take their holidays there and keep close to nature under the most comfortable conditions, amassing a store of health which will make them the better able to cope with the strenuous life to which they return after their vacation.

‘When deciding on where to take their holidays, Canadians might well consider the claims of places within their own frontier, and spend their money in the Dominion instead of carrying it away to swell the millions annually spent in Maine, in Florida, and in California. For I do not believe that any place presents natural attractions greater than those of the Parks of Banff, Glacier and Jasper. The time may come when it will be found desirable to establish a national sanatorium at or near one of these reserves, and this would interest your Association directly in the success of the Parks.’

COMMERCIAL SIDE OF PARKS.

In my report last year I called attention to the commercial side of National Parks. I pointed out that each year hundreds of millions of dollars were spent by tourists in France, Switzerland, Italy and other old World countries; that hundreds of millions of dollars were also spent annually on this continent by tourists. The figures indicated that Canada—with incomparable scenic attractions—can reasonably

expect an annual revenue from the tourist traffic which will bulk far into the millions, and justify the expenditure of large sums of public money upon development work to render its scenic attractions easily, comfortably and safely accessible.

That this aspect of National Parks being valuable as a commercial asset is recognized in countries where these national playgrounds are not matters of recent development is shown by the attention given to the nursing of tourist traffic in such countries as Switzerland, France, Italy, Germany and elsewhere on the continent of Europe, where facilities and comforts are lavishly provided to attract and encourage tourists from all over the world.

The potentialities of the field even for countries already garnering millions each year from the tourists is indicated by the following item published last winter in the newspapers:—

'Department for Tourists.

'ROME, January 18, 1913.—A State Tourist Department is advocated by Signor Feraris, one of the most prominent members of the Chamber of Deputies, as the easiest means of increasing Italy's wealth. The state revenue benefits considerably from the present tourist traffic in the matter of customs, railway tickets and entrance fees to museums and galleries.

'Signor Feraris has in view the doubling of the present tourist revenue, and advocates direct intervention of the state to promote tourist traffic.

"The industry of the Foreigner" he says, "has been sadly neglected by the State. Italy's many advantages are not sufficiently advertised, and while the efforts of the hotelkeepers and others are praiseworthy, they lack the support of the Government." Therefore he wants sufficient backing for his boom.

'Italy's increased political importance has rendered unanimous reforms indispensable, and also an improvement of the sanitary conditions of the workmen. To pay for this he suggests the establishment of a State Tourist Department, with agents throughout the world, who will urge foreigners to visit Italy and spend their money.

'Signor Feraris has the support of a number of powerful institutions and may succeed in his scheme.'

CANADIAN TRAVEL ASSOCIATION.

It is significant that an association has been organized in Canada during the present year for the purpose of promoting tourist traffic in the Dominion. It is called the Canadian National Travel and Immigration Association, and publishes a magazine *Travel in Canada*. The initial number of the magazine points out that already over three million tourists from the United States annually visit Canada. It submits statements indicating that foreign tourists spend over \$2,000,000 each year in Montreal, that even a larger sum is spent in Toronto annually, and that Winnipeg, Vancouver, and other Canadian cities reap, each year, a harvest of over a million dollars each from foreign travellers.

VALUE OF AUTOMOBILE ROADS.

In connection with the commercial side of National Parks, automobile traffic appears to provide a means of immensely increasing the revenue to be derived by the people of Canada from the tourist. The Parks Branch is shaping its development work on lines calculated to make the unrivalled scenery of the Rockies accessible to automobile traffic. Consideration of the expansion of recent years with respect to motors and motoring cannot fail to convince one that adequate trunk roads through the mountains will inevitably mean a huge automobile traffic, and consequently a large expenditure of money by the autoists. Statistics indicate that in the United States alone there are about a million motor cars—a car for every hundred of population.



Photo by Harmon.

Ice Cave, Yoho Glacier, Yoho Park.

It is a well established fact that most motorists spend their holidays in their cars. Many facilities already exist which will bring the motorist to the foot-hills of the Rockies. What motorist will be able to resist the call of the Canadian Rockies when it is known that he can go through them on first-class motor roads. And what a revenue this country will obtain when thousands of automobiles are traversing the Parks.

THE CHIEF PURPOSE OF PARKS.

However, the commercial side of National Parks is only an incident, though indeed a very important one. National Parks exist primarily to serve the needs of the Dominion's own people.

National Parks are in reality national recreation grounds. They are set aside because it is being recognized more and more that recreation where fresh air, sunshine, beautiful natural scenery are combined, means an uplifting of spirit, a renewal of strength of body, a stimulation of mind. National Parks provide the means of recreation in the great out-of-doors for all who wish to take advantage of them; they stand out as a national recognition that recreation in the out-of-doors is essential for the physical, mental, moral health of the people, and consequently emphasize to the public the suggestion of such recreation, even if it has to be sought elsewhere than in the National Parks. The spirit of the National Park idea cannot be more effectively crystallized than by the following extract from John Muir, the American writer, known throughout the continent as the lover of the mountain, the wilderness and all nature:—

‘The tendency nowadays to wander in wildernesses is delightful to see. Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home; that wildness is a necessity and that mountain parks and reservations are useful, not only as fountains of timber and irrigating rivers, but as fountains of life. Awakening from the stupefying effects of the vice of over-industry and the deadly apathy of luxury, they are trying as best they can to mix and enrich their own little outgoings with those of nature, and to get rid of rust and disease.’

EDUCATIONAL INFLUENCE.

A presentation of the influence of parks—of the influence of nature—upon the individual is made by Chas. Mulford Robinson, author of ‘Modern Civic Art,’ in the following words:—

‘Education gained from the parks is that which makes for broader public sympathies and wider interests, for finer appreciation of the good things of life; it is that education which opens the public's eyes to the beauty that surrounds them, which makes us less of the animal and more of the man, richer through development of the resources within ourselves. The song of a bird, the scent of a flower, the glory of a sunset sky, are parts of our common heritage. The sense impression that they make is dependent only on ability to perceive and faculty to enjoy; and this ability and this faculty are susceptible of education. If the park can cultivate these in large numbers of people, as an incident of its service as a public pleasure ground, it will bestow great benefit; it will vastly increase its usefulness to the community; it will not only heighten the enjoyment of its own attractions, but it will put into hearts and minds a faculty of enjoyment that will be of service in daily life. To such extent the investment which has been made in parks will be paying daily dividends on the common stock of human experience.’



The Giant Stairway, Paradise Valley, Rocky Mountains Park.

The name park appears to create some confusion in the public mind in regard to National Parks. The quotation from Muir suggests the difference between parks as ordinarily understood and National Parks. The city park is a breathing space which the public demand as a necessity for their well-being, but for the most part it is artificial in appearance and small in area. The national park on the other hand is huge in area and in reality is a wilderness in its natural state. A city breathing spot can in a small way provide refreshment of mind and body, but adequate relaxation and recuperation is realized only from the influence of nature—the nature of the wilderness.

SIGNIFICANCE OF PARKS.

The significance of National Parks is perhaps best illustrated by a comparison with city parks. Cities everywhere are multiplying their civic parks. This is done in response to an insistent public demand. The city tax-payers pay for these parks because they feel such recreation facilities pay them ample dividends in humanity by promoting the health and happiness of the people. The ultra-wealthy in a city can and do have their own private grounds or parks, but the masses can enjoy fresh air and the beauties of nature only in the public parks. But the masses cannot live in city parks, they cannot camp in them, fish in them, study nature in its wild state in them. As yet in Canada the people for the most part can reach, without great difficulty, many places where nature is still in its wild state, but Europe and the United States teach the lesson that time will soon change this unless precautions are taken now.

NECESSITY OF RESERVATIONS.

The necessity of National Park areas being set aside is emphasized by a review of conditions in other countries. Take the United States, a country very little older than Canada. In 1892 the following petition was addressed to the State Legislature of Massachusetts:—

‘The undersigned petitioners respectfully represent that the seashores, the river banks, the mountain tops, and almost all the finest parts of the natural scenery of Massachusetts are possessed by private persons, whose private interests often dictate the destruction of said scenery or the exclusion of the public from the enjoyment thereof. In the opinion of the undersigned, the scenes of natural beauty to which the people of the Commonwealth are to-day of right entitled to resort to for pleasure and refreshment are both too few in number and too small in area; and therefore, respectfully ask that an inquiry be instituted for the purpose of ascertaining what action, if any, may be advisable in the circumstances.’

An investigation followed, and the facts brought out are most significant. The agent appointed to investigate, to quote his own words, ‘found everywhere recent changes in the ownership of land, and a movement of people of means from the cities and the interior of the county to the shore regions of the states. I found leagues and leagues together of the shore line to be all private holdings, without the intervention, in these long reaches, of a rod of space on the shore to which the public had a right to go. I walked across the domain of one man who owns about six miles of shore line. I found a great population inland hedged away from the beach, and all conditions pointing to a time, not remote, when nobody can walk by the ocean in Massachusetts without payment of a fee, as we formerly had to pay for a glimpse of Niagara. I could see that the movement for more open spaces of public resort—for use and enjoyment of the people—has most vital relations to civilization, and that it has been instituted in response to a pressing need.’

AMBASSADOR BRYCE'S TESTIMONY.

Ambassador Bryce, in an address on National Parks, at a meeting of the American Civic Association in Baltimore, November 20, 1912, said in part:—

‘Europe is a populous, overcrowded continent; you will some day be a populous and ultimately perhaps even an overcrowded continent, and it is well to take thought at once, before the overcrowding comes on, as to how you will deal with the difficulties which we have had to deal with in Europe; so that you may learn as much as possible from our experience, and not find too late that the beauty and solitude of nature have been snatched from you by private individuals.

‘Now let us remember that the quantity of natural beauty in the world, the number of spots calculated to give enjoyment in the highest forms, are limited, and are being constantly encroached upon. We, in England and Scotland, have lost some of the most beautiful scenery we possess, because it has been taken into private estates. A great deal of the finest scenery in Scotland is now practically unapproachable by the pedestrian or artist or naturalist because people have appropriated it to their private purposes and keep the people out.

‘I beg you to consider that, although your country is vast and has scope of natural beauty far greater than we can boast in little countries like England, or Scotland, even your scenery is not inexhaustible, and with your great population and the growing desire to enjoy the beauties of nature you have not any more than you need.’

While Ambassador Bryce's words were addressed to Americans, it is obvious that they apply with equal force to Canadians. In this connection it may be added that Mr. Bryce, in the course of an address before the Canadian Club of Ottawa, spoke as follows:—

‘I know that you have been doing that in Canada (establishing national parks) and I hope that if you need any further encouragement to do it, you will find it in the example of the Australians, and that you too will set apart more and more of those magnificent areas of scenery which you possess in the Rocky mountains for the enjoyment of the people, looking forward to a day when the population of Canada will be tenfold what it is now and when the value of places where the pleasures of nature can be cultivated, and where the wild animals can be preserved, and where the charm of solitude can be enjoyed—when the value of all these things will be even greater than it is at this moment.’

OBJECT LESSONS.

To emphasize the lesson to be learned from the United States the following quotations from John Muir are given:—

‘Only thirty years ago, the great Central Valley of California, five hundred miles long and fifty miles wide, was one bed of golden and purple flowers. Now it is ploughed and pastured out of existence, gone forever—scarce a memory of it left in fence corners and along the bluffs of the streams. The gardens of the Sierra also, and the noble forests in both the reserved and unreserved portions are sadly hacked and trampled, notwithstanding the ruggedness of the topography—all excepting those of the parks guarded by a few soldiers. In the noblest forests of the world, the ground, once divinely beautiful, is desolate and repulsive, like a face ravaged by disease. This is true also of many other Pacific Coast and Rocky Mountain valleys and forests. The same fate, sooner or later, is awaiting them all, unless awakening public opinion comes forward to stop it.

'Most of the wild plant wealth of the East also has vanished—gone into dusty history. Only vestiges of its glorious prairie and woodland wealth remain to bless humanity in boggy, rocky, unploughable places.'

National Parks, moreover, have a real patriotic mission. One side of this was touched upon by J. Horace McFarland, president of the American Civic Federation, in the course of an address upon the subject 'Are National Parks worth while?' His remarks, of course, referred to American parks but change the word 'American' to 'Canadian,' and the concluding portion of his address crystalizes a thought of equal application to Canada. He said:—

'Consider what it is that inspires us as we sing the National hymn. Is it our wonder of mining, showing in the hideous ore dumps of the sordid mining village? Is it in the burned-over waste that has followed the cutting of much of our forest wealth? Is it the power house in which is harnessed the beauty of Niagara? Is it the smoking factory chimneys, the houses of the grimy mill town, the malodorous wharfs along our navigable rivers. Is it even the lofty metropolitan sky scraper, or the great transcontinental steel highway?

'No, not one of these produces patriotism. Listen to the most sordid materialist who is American in birth or residence, as he boasts: it is always of the beauty of his town, his state, his country. Our devotion to the flag begins in that love of country which its beauty has begotten; it may end, at the last supreme test, in the beauty of soul that makes the patriot ready to die for his country in battle—if just battle there may ever again be.

'So I hold that in stimulating and safeguarding the essential virtue of patriotism, the beauty of the American park stands forth as most of all worth while.'

WORTH-WHILE PARKS.

In its parks and, for that matter, outside its parks, Canada has the impressive scenery and the other natural attractions to justify and compel pride of country. Most of the Dominion Parks so far established are in the Rocky mountains. To show that their outstanding charm and attractiveness are recognized by those whom the world recognizes as having the right to speak with authority upon the subject of mountains and scenic attractions, the following extracts are given:—

The Reverend James Outram, a well-known English climber, and author of 'The Heart of the Canadian Rockies':—

'But the wondrous glacial fields, the massing of majestic ranges, the striking individuality of each great peak, the forest areas, green pasture lands, clear lake and peaceful valley are nowhere found harmoniously blended on the western continent until the traveller visits that section of the Rocky mountains which lies within the wide domain of Canada.'

Extract from 'Climbs and Explorations in the Canadian Rockies,' by Prof. J. Norman Collie and H. E. M. Stutfield, of London, England, pioneer climbers and explorers:—

'On the other hand, they have a very remarkable individuality and character in addition to special beauties of their own which Switzerland cannot rival. The picturesque landscapes in the valleys; the magnificence of the vast forests, with their inextricable tangle of luxuriant undergrowth, and the wreck and ruin of the fallen treetrunks; the size, number and exquisite colouring of the mountain lakes; in these things the new Switzerland stands pre-eminent. In the Alps we can recall only one lake of any size surrounded by high glacier-clad mountains, namely, the Oeschinen See; in the Rockies, they may be counted by the score—gems of purest turquoise blue, in matchless settings of crag and forest scenery, glacier and snow, storm-riven peak, and gloomy, mysterious canyon.'



Wild Deer near Banff.



Wild Deer in Game Warden's Garden, Banff.

W. D. Wilcox, the American author, who was one of the first to explore the Mount Assiniboine district, says in his charmingly illustrated book, 'The Rockies of Canada':—

'It is becoming more and more apparent every year that this part of the Rockies is not only a great field for Alpine climbing in its strictest meaning, but undoubtedly the most extensive and interesting field presented by any readily accessible range in the world. That such men as Collie, Stutfield, Woolley, and Whympers have come over from England several seasons to climb here, that the Appalachian Mountain Club, represented by Abbot (who lost his life on Mount Lefroy), Fay, Weed, Thompson, and others, and expert climbers such as Outram and Eggers have found climbs that tested their powers to the utmost, or repelled all attacks, even under the leadership of expert Swiss guides, tells much about the real nature of the climbing.'

T. G. Longstaff, the distinguished English alpinist, in an article in the *London Field* recently, said:—

'In the Canadian Rockies and the Selkirks there is a country waiting for recognition which I believe is destined to become the *playground of the world*, just as the Alps have been for one short century the playground of Europe. In no other mountain region of the globe do peak and cliff, snowfield and glacier, alpland and forest, lake, cataract, and stream form such a perfect combination as is to be found, not in one, but in hundreds of places in these glorious ranges. Mere questions of altitude are beside the mark. Though I hold that no one can fully appreciate mountain scenery who has not actually come to grips with the peaks themselves, yet the fascination of the Canadian mountains is such that merely to travel through them and camp amongst them is sufficient reward for any one who is not blind. On the whole it must be admitted that the average difficulty of the climbing does not attain the European standard, but there are many peaks whose ascent has only been accomplished with great difficulty, and there are certainly a far larger number of such peaks which have never been seen by any mountaineer.'

Prof. Coleman, of Toronto University, author of 'The Canadian Rockies,' and ex-president of the Canadian Alpine Club, says:—

'None of the mountains of North America can be measured against the Himalayas or the higher Andes in altitude, and to climbers familiar with these giant peaks the Canadian Rockies may seem quite insignificant; and yet some of the most famous workers among the Himalayas, the Andes, the Caucasus, the Alps, have later become so enamoured of the Canadian Rockies as to come back season after season. To draw experienced British climbers from the French or Swiss Alps, only a few hours' journey from home, to Banff or Laggan or Glacier, five thousand miles away, implies rather potent charm.

'Much the same is true of the skilful American climbers, who flock to British Columbia instead of spending their summers a few hundred miles to the south among the mountains of Colorado, which are thousands of feet higher. Why should the Canadian Rockies prove more fascinating than Pike's Peak or Mount Whitney? It is evident that the cause is not to be found in altitude alone.

'The beauty and attractiveness of mountains depend, of course, on various factors, of which absolute height is only one. Relative height above the surrounding plains or valleys counts for more, and permanent snowfields and glaciers are needed to give the true Alpine charm and these may be found on peaks of only nine thousand feet among the Selkirks. . . . On the other hand, the much higher mountains of Colorado rise from a plain seven thousand feet above the sea and have so feeble a snowfall that they are bare before the end of the summer.

‘Except in the short extension of the Canadian Rockies into Washington and Montana, there are scarcely any glaciers to be found south of the international boundary. The dryness of the air and the strong and more nearly vertical sun of summer prevent the formation of glaciers on most of the high American mountains and on all those of Mexico, robbing them of the most thrilling and seductive features of the Alpine peaks, the gleam of snow, the blue of crevassed glacier tongues, the wildly heaped moraines, and the white glacial torrents in flood on a sunny afternoon.

‘The famous canyon of the Colorado three hundred miles long and five thousand feet in depth, with a breadth of ten or fifteen miles, is out of the running as compared with the valley of the Upper Columbia at Surprise rapids, which is more than eight thousand feet below the nearer Rockies and Selkirks, the opposite summits standing fifteen or twenty miles apart. Probably five times as many cubic miles of rock have been carved from this valley and disposed of as in the Colorado canyon.’

NEW LINES OF DEVELOPMENT.

A study of the mission of National Parks has suggested many new lines of development. If recreational facilities are important for a nation, it is obvious such facilities should be made available for all the people.

At present most of Canada's national recreation grounds are in the west. Geography places them beyond the reach of thousands in the East. Canada's rapidly-growing cities in the East have two great needs—playgrounds in the cities and resorts in the country where the people, especially the poorer children, can have summer outings. The establishment of city playgrounds is in general a matter for the cities to deal with. But much advantage would follow if the services of some properly qualified Government officer were available for any city taking up the playgrounds movement, to help on the work by way of suggestion, advice, direction.

‘The present need,’ says a magazine article on the playgrounds movement in Canada, ‘is a national basis on which to rest the playgrounds superstructure. Some of the playgrounds are under church control; some are special associations’ peculiar enterprises; some are municipal concerns; school boards run others. There is no entirety, no common headquarters, no possible way of making concerted progress, as things exist. Developments are therefore more or less haphazard.’

It is suggested that a specially qualified officer should be associated with the Parks organization to carry out the obvious duties in this connection.

FOR CITY NEEDS.

The Parks organization can properly assist the playgrounds movement as indicated because the purpose of the Parks organization is to provide for adequate recreation for the people, but it has, in the matter of camp sites or recreation resorts near the large centres of population, a much more important duty.

Apart altogether from the consideration that certain districts, notable for their scenic attractions, should be reserved for posterity from the hand of the vandal and speculator, it seems that for the National Parks to serve their highest function they should be places of rest and recreation for those in Canada most needing their revivifying influences; that is, for the city toilers.

Modern life tendencies are more and more towards the cities and towns; in Canada, during the last ten years, there has been an increase in the rural population of 16.48 per cent and in the urban of 63.83 per cent.

As the years progress this difference will undoubtedly grow more and more; whereas Canada's rural population at present is 55 per cent and the urban 45 per cent—that of the United States is 21 per cent for rural and 79 per cent for urban.

CAMPING SITES.

There are few matters of more importance to the well-being of the city dwellers than facilities for getting close to nature in the great out-of-doors. If all Canada's city dwellers are to be ensured of such facilities—and all require them—the time has arrived for making provision. What is required is quite distinct from the park areas that a city can itself provide, namely, breathing spots in the city or picnic parks of 100 or 200 acres in the suburbs. What is required is an area in its natural state large enough to constitute a small wilderness—an area measured in square miles—where all who wish may camp and roam and holiday. A place which may not provide as spectacular scenery as the Mountain Parks of the West but which, like them, will belong to and be free to all the people and will be preserved for them from the exploiter and the vandal for all time. To be of real value such parks must be within comparatively easy access to the cities. Each year's delay in the creation of such parks will increase the difficulties in the way of their establishment. If action is taken now, the poor of Canada's cities, and the public in general, will for all time be sure of a place where they can secure the advantages of recreation in the out-of-doors.

Playgrounds and camp-sites such as suggested would mean much for the country because of their uplifting effect upon city children. A concrete illustration of this is the condition reported in 1909 from Chicago. It was found there that within a half mile radius of her twelve playgrounds, juvenile delinquency had decreased 44 per cent, while the same year it had increased 11 per cent in the city as a whole. If it is right for the country to spend millions on charitable and penal institutions, it is surely wise to spend something on measures which will help to make better citizens and thus render penal and charitable institutions less necessary.

HISTORIC PLACES.

In connection with the camp site proposal it has been suggested that some might be located at points of historic interest.

There are many places of historic interest, poorly marked or unmarked at all. While it somewhat out of the sphere of National Parks to deal with the marking of battlefields, it is most desirable, from a national standpoint, that such should be set aside as national reserves and that the ruins, old forts, old towers and such, holding historic associations, should be preserved. Canada has much in her history to inspire the rising generation with pride of their forbears and pride of country.

It would be doubly beneficial if these historic spots were not only properly restored and marked but they should be used as places of resort by Canadian children who, while gaining the benefit of outdoor recreation, would at the same time have opportunities of absorbing historical knowledge under conditions that could not fail to make them better Canadians.

WORK OF THE YEAR.

The policy followed during the year in connection with the work in the various parks was to improve existing roads, trails and other works rather than to undertake very much new work.

Perhaps the work of most importance in the parks is the road work and it was determined to bring up all the roads to a satisfactory standard before undertaking the construction of new roads. Of course, an exception has to be made from this in so far as the automobile cross-mountain highway is concerned. A substantial amount of new work was done upon it and the policy is to press it through as rapidly as possible.

On this automobile road a steel bridge was erected across the Bow river at Castle and about 10 miles of road constructed from there to Vermilion pass on the Continental Divide. The automobile road westward to Vancouver from Vermilion is being constructed by the Government of British Columbia. The unit in the Park from Castle to Vermilion was built during the year in order that British Columbia officers might have access to the eastern end of their work and thus be in a position to carry on construction from the east as well as from the west.



Cutting the New Automobile Road through Rocky Mountains Park.

New plans for the proposed bath-house at the Cave and Basin, Banff, were prepared by Messrs. Painter and Swales, architects. Mr. Painter has designed, or remodelled, many important buildings in Canada, including Windsor station, Montreal, Canadians Pacific Railway hotels at Banff and lake Louise, and the Russell Theatre, Ottawa. He prepared bath-house plans of very attractive design. Excavation work in connection with the bath-house was commenced on September 1, and the foundation practically completed by the end of January, when work was stopped.

The increasing popularity of Banff is well illustrated by the demand for lots there during the past year. So great was this demand that by the middle of July there were no lots in the townsite available, and a survey of additional lots had to be undertaken.

It is interesting to note that despite the unfavourable weather of the summer of 1912 there was a considerable increase in the number of visitors to Rocky Mountains Park. The figures are:—

1911-12..	73,725
1912-13..	75,882
Increase..	2,157

ROYAL VISIT.

A notable event in the history of the parks was the visit to Rocky Mountains Park and Yoho Park during the summer, of Their Royal Highnesses the Duke and

Duchess of Connaught and Princess Patricia. At Banff the Royal party spent a week. In reply to an address of welcome presented on behalf of the citizens of Banff, His Royal Highness spoke as follows:—

‘Gentlemen, I beg you to accept my very best thanks for your loyal address of welcome to myself, to the Duchess, and to my daughter.

‘Although my present journey is devoted almost entirely to the duties connected with my office as Governor General, I could not have passed Banff without making a short stay, devoted entirely to pleasure. I have the most pleasant recollections of a former visit here and my memory has often flown back to the views of the great Rocky mountains frowning down upon the beautiful valley of the Bow river.

‘In a country where so much is constantly changing, it is pleasant to find a National Park such as this, which has been set aside by the wisdom of your legislators, where nature may be felt in all her splendour, where the hand of man will never be allowed to mar the scenery. I can assure you that it gives me great pleasure to renew my acquaintance with the Rocky Mountains Park of Canada and my only regret is that I have so short a time to enjoy the many attractions which are presented by Banff and its vicinity.’

SEEING THE PARKS ON FOOT.

There is every year an increasing number of visitors who wish to explore the parks on foot, in many ways the best means of becoming acquainted with the beauties of the mountains. To meet the needs of this class of tourists it is proposed to open up foot-paths to points of scenic beauty and to build rest-houses at suitable places along the trails.

THE PRESERVATION OF WILD LIFE.

All parks are game preserves and the protection which has been afforded within park boundaries has already resulted in a noticeable increase in wild life. The success which has followed these efforts towards protection has led to a consideration of an extension of the preserve idea.

For the preservation of bird life it is felt that small sanctuaries at suitable places should be established throughout the country to ensure the birds protection during the breeding season.

It also appears that with the great demand for fur and the rapidly increasing prices it brings, breeding preserves for animals should be established in the far north—the home of the best fur-bearing animals.

A proposal is now under consideration to establish a protected area for the preservation of the herd of wild buffalo in the Fort Smith country and it is considered that if this area were somewhat enlarged and adequately protected it would become a natural breeding ground for fur-bearing animals. These animals would soon learn they were protected in this area and as they would breed there under the most favourable conditions the overflow should in a short time serve to supply a very large contiguous district.

Reverting to the question of bird protection it should be pointed out that at the last session of the recent United States Congress a Bill was passed providing for federal protection for migratory birds. It was shown that the United States producers sustained an annual loss of \$800,000,000 through the disturbance of nature's balance consequent upon the destruction of insectivorous birds. Officers of the Geological Survey, who are authorities on bird life, calculate that the annual loss sustained in Canada from this cause is probably \$80,000,000.

In view of these facts the question arises whether Canada should not follow the example of the United States and deal with these matters from the Dominion standpoint.

HOT SPRINGS.

A matter of much interest is the fact that tests of the thermal springs at Banff show these waters to be radio-active. The tests were made by officers of the Geological Survey at the request of the Parks Branch. It is now generally admitted that the curative value of thermal springs depends primarily upon radio-activity and it is therefore very satisfactory to know that the springs at Banff possess this property.

POWER RESERVATION.

It was noted in last year's report that the privilege of constructing a conservation dam at lake Minnewanka had been given to the Calgary Power Company on certain conditions, one of which was that a thimble should be inserted to provide for the development by the Parks Branch of electric power at Banff.

In this connection arrangements have been made with a firm of electrical engineers for the preparation of plans and it is expected the branch will shortly be in a position to ask for an appropriation for the carrying out of the enterprise. I may say that the engineers were instructed to make their report as though it were for a private party dealing with the scheme purely as a commercial proposition. The report indicated that the enterprise should prove a paying one almost from the first.

REINDEER.

A question of considerable importance has been raised in consequence of a petition forwarded by the Yukon Council requesting that the Federal authorities establish reindeer farms in the Yukon. Experiments of the United States Government in the matter of reindeer farms in Alaska have been very successful. There are now 30,000 or 40,000 reindeer in Alaska and they furnish the natives with food, clothing and means of transportation.

It is well known that horses cannot be satisfactorily used in the north on account of the lack of food. Dogs, which now constitute the means of transport, are of comparatively little use because food for them has to be carried and on a long trip the food necessarily constitutes the bulk of the load.

Reindeer, on the other hand, can live on the moss of the country they traverse, and, moreover, in case of shortage of food provide good meat for man.

It is believed that the Canadian hinterland is rich in minerals. It is doubtful whether prospecting and development work can ever be carried on successfully until reindeer are available for transportation purposes.

Therefore the Parks Branch has been making careful inquiries in regard to the subject.

MILITARY PATROL.

The number of visitors to the Parks is now becoming so large that the necessity of patrolling the roads and trails is becoming a matter of pressing importance. Patrol is desirable for the purpose of securing the safety of the public against slides, and such dangers peculiar to mountain districts and also against hold-ups by highwaymen. So far, Canadian parks have been free from the latter, but there is no certainty of a continuation of this immunity unless adequate measures are taken in that regard.

It is felt that this could best be done by having a body of Mounted Police or Dominion Police permanently stationed in the parks. In this connection it has also been suggested that the parks might be used as training stations for recruits for the Royal Northwest Mounted Police. The Parks would provide ideal training grounds and, in addition, the presence of the recruits would be of material assistance to the parks' administration in the maintenance of law and order.

ARTISTIC PLANS OF DEVELOPMENT.

Parks are being developed for the future as well as for the present and it is felt that work should be carried out on comprehensive and carefully matured plans.



Rocky Mountain Goats in captivity, Banff.

Arrangements have therefore been made for securing artistic plans of development, especially as regards townsites.

THE BANFF ZOO.

At present the branch maintains at Banff an attractive, though not very large, Zoo. While it now contains some animals that are not native it is felt that it should contain specimens of all Canadian animals and that eventually none others should be kept. It is also intended that as complete as possible a collection of native birds should be added to it. There is very little room for expansion where the present Zoo is located, but a new site on Tunnel mountain has been selected which will meet all requirements.

PARKS LITERATURE.

At present there is a great lack of literature containing adequate information regarding the Parks. Not only should Parks literature contain the usual descriptive material but it should also contain information relating to the flora, the fauna, the geology and other features. Steps have been taken to secure such.

In this connection it may be added that it is intended to erect pointers and guide boards indicating, for the benefit of the tourist, the various points of interest or routes of special attraction.

MOOSE MOUNTAIN PARK.

It is hoped to finally establish during the year the new Buffalo Park at Moose Mountain, near Arcola and Carlyle, Saskatchewan. Right of way for the fence was cleared and fireguard ploughed, but in view of the many arguments for an extension of the area or a change to a more suitable location, action regarding the construction of a fence was postponed.

EXTENSION OF AREAS.

Reference was made last year to the desirability of an extension of the areas of existing parks. No final action has yet been taken in that connection. From the Parks' point of view this is a matter of the greatest importance. There are many extraordinary scenic attractions—for instance, Maligne lake—which are now outside Parks' boundaries. The sooner they are given the protection afforded by incorporation in the Parks system the more certain is their preservation from the fate of the sea-shore areas of Massachusetts and beauty spots of Scotland referred to in the beginning of this report.

TOWNSITE LOTS.

A strict compliance with building conditions in regard to lots in Banff and other townsites in the Parks has been insisted upon. This policy was adopted because it was found that speculators were taking up all the desirable lots under agreement and simply holding them for speculation, to the disadvantage of the towns concerned and to the bona fide parties who were anxious to secure building sites. Failure to comply with building conditions is promptly followed by cancellation and the result has been that about sixty lots were thus made available for the public. I may add that it was decided to dispose of the right to lease these lots by public competition in order that all might have an equal opportunity to secure them.

ALPINE CLUB.

The 1912 camp of the Canadian Alpine Club was held at Vermilion pass in Rocky Mountains Park. The camp was largely attended and was a great success in every respect. The club is doing most valuable work for the parks and for Canada.

Thanks to its efforts it appears mountaineering in Canada will ere long become a sport and recreation of the many.

Respectfully submitted,

J. B. HARKIN,
Commissioner.

SUMMARY REGARDING DOMINION PARKS AND CHIEF OFFICERS IN CHARGE.

In October, 1912, Mr. P. C. Barnard-Hervey, of Calgary, was appointed Chief Superintendent of Dominion Parks, with headquarters at Edmonton, succeeding Mr. Howard Douglas.

Rocky Mountains Parks, province of Alberta (area, 1,800 square miles); Superintendent, A. B. Macdonald. Mr. Macdonald's services terminated on March 31, 1913, and he was succeeded by Mr. S. J. Clarke, of Calgary.

Yoho and Glacier Parks, British Columbia (areas, 560 square miles and 468 square miles respectively); Superintendent, George Hunter. Mr. Hunter was transferred to the office at Banff and subsequently resigned. He was succeeded as Superintendent of Yoho and Glacier Parks by Mr. F. E. Maunder, of Field, B.C.

Jasper Park, Alberta (area, 1,000 square miles). Mr. Byron E. Burton, of Edmonton, was Superintendent of this park during the summer season and was succeeded by Lieutenant Colonel S. M. Rogers, of Ottawa.

Elk Island Park, Alberta (area, 16 square miles), Superintendent, Archibald Coxford.

Buffalo Park, Wainwright, Alberta (area, 162 square miles); Edward Ellis, Superintendent, succeeded during the year by W. E. D. McTaggart, Wainwright, Alberta.

Waterton Lake Park, Alberta (area, 13.50 square miles), Forest Ranger, in charge, John George Brown.

Moose Mountain Buffalo Park (area, 28 square miles); Superintendent, Lowry Hanna, Arcola, Saskatchewan.

The St. Lawrence Islands Park consists of eleven islands and one reservation on the mainland with a combined area of about 140 acres.



Glacier flowing into Berg lake, Mt. Robson district.

Photo by Harmon.

No. 1.

REPORT OF THE CHIEF SUPERINTENDENT OF DOMINION PARKS.

EDMONTON, ALBERTA, April 1, 1913.

J. B. HARKIN, Esq.,
Commissioner of Dominion Parks,
Ottawa, Ont.

SIR,—I have the honour to submit herewith the fifth annual report of the Chief Superintendent of Dominion Parks for the fiscal year ending March 31, 1913.

It affords me great pleasure to inform you that on taking over the duties of my predecessor, Mr. Howard Douglas, on October 20, 1912, I visited the various parks placed under my jurisdiction where development work was in progress.



Fresh and Hot Sulphur Water Swimming Pools at Banff Springs Hotel.

The parks visited were:—

1. The Rocky Mountains Park,
2. The Yoho Park and Glacier Park,
3. The Buffalo Park,
4. The Elk Island Park,
5. The Jasper Park.

The reports from the various superintendents are appended hereto. I have arranged them for convenience of reference as has been done in previous years, as follows:—

1. Report of Chief Superintendent of Dominion Parks.
2. Report of Superintendent of Rocky Mountains Park.
- 2a. Report of Curator of Banff Museum.
- 2b. Analysis of Nationalities of Visitors to the hotels.
- 2c. Report of the Alpine Club.
3. Report of the Superintendent of Yoho and Glacier Parks.
4. Report of the Superintendent of Buffalo Park.
5. Report of the Superintendent of Elk Island Park.
6. Report of the Forest Ranger of Waterton Lake Park.

As Jasper Park was virtually without a superintendent for the greater part of the year, details of the work done will be included in my report under the heading of Jasper Park.

As in previous years the increasing popularity of our National Parks is proved by the annual increase of visitors to the various parks.



Cave Avenue, Banff. Mt. Rundle in distance.

Their Royal Highnesses, the Duke and Duchess of Connaught and the Princess Patricia, paid a visit to the Rocky Mountains Park during their tour through the Dominion; they remained a week and expressed themselves delighted with the reception accorded them and were loud in their praises of the wonderful beauties of Banff.

The number of visitors to Rocky Mountains Park for the year ending March, 1912, was 73,725; those for the year just closed, 75,882, an increase of 2,157. In addition to this there were thousands who were unable to find accommodation and had to con-

tinue their journey, much to their regret. Many additions are being made to the various hotels which will no doubt considerably help to relieve the congestion during the rush period, May to September. My report must necessarily be condensed, as it was practically the end of the working season, November, when I took over the duties of my predecessor. The reports submitted by the various superintendents fully cover the ground.

The principal work under progress was the placing of the foundations for the new bath-house at the site of the Cave and Basin. Considerably difficulty was encountered in the foundation work owing to the unusual formation of the subsoil which consisted of a honey-combed sulphur formation. This necessitated piling to safely carry the reinforced concrete foundations and superstructure. The building, when completed, will without doubt be the most up-to-date bathing institution of its kind on the continent and will add considerably to the revenue of the Parks.



Club House at Banff Golf Links.

Considerable trouble was experienced with the sewer and waterworks system, but I trust there will be no re-occurrence of these conditions, as steps are being taken to remedy all defects and thoroughly overhaul the whole system.

The Castle-Vermilion road has been partially completed for a distance of some nine miles. A steel bridge of two ninety-foot spans was built across the Bow river at Castle. Considerable work remains to be completed before this road will be available for motor traffic. It is proposed to complete this link of the Banff and Windermere road during the coming season.

A number of new roads have been constructed in Banff townsite, yet there still remains considerable work to be done to make it what it should be, 'the most perfect playground for future generations.'

The Calgary to Banff coach road would have been well patronized but for the unusually wet season which rendered impassable a few portions of the present road which are too narrow for safety. It is the intention to have this road placed in first-class condition for the coming season's traffic.



Buffalo in Banff Paddock.

YOHO AND GLACIER PARKS.

As the winter had set in and the snow was very deep, I was unable to personally inspect any of the work undertaken during the past season, but the report of the superintendent fully goes into all details. For the coming season a considerable amount of work has been planned to improve existing roads and trails.

That portion of the townsite of Field owned by this department should be provided with a sewerage and waterworks system; at present the water supply of some of the inhabitants is procured by tapping springs whilst others derive their supply from the Canadian Pacific Railway water mains. There is no sewerage system whatever.

As the Kicking Horse river is continually changing its course, considerable river protection work will be necessary to prevent the washing away of the athletic ground and several portions of the Yoho road.

BUFFALO PARK.

The report of the Superintendent of Buffalo Park deals in detail with the season's farming operations, which were a decided improvement in the right direction. Where it is at all possible to cultivate land in our parks, a sufficient area should be placed under cultivation to supply the necessary feed for all the animals within the enclosure. The season being so wet the grain did not ripen, but it was cut and used for feed, which answered admirably.

It will be necessary to thoroughly drain the hay meadows to ensure a plentiful supply of hay for the increasing buffalo herd. The work must be undertaken this year.

There is no accommodation for the men employed at winter quarters and it will be necessary to erect a suitable building and also additional stabling.

The loading and handling corral situated on the edge of a swamp will necessarily have to be removed to a higher location. This will be done when this large park is subdivided into a number of pastures for the better care and supervision of the buffalo, wapiti, moose and deer contained therein.

As the park is at present laid out it is impossible to pay attention to the proper care and breeding which are so necessary in producing the very highest standard of excellence.

Considerable difficulty and danger were encountered in securing the exact number of buffalo in the herd. After several months of painstaking work the exact number of males, females and young stock was ascertained to be: Bulls over seven years and aged, 243; cows, 187; yearlings and calves, 787. The loss was very small indeed. The sex of the younger stock will be ascertained at a later date.

The number of visitors passing into the park to view the largest buffalo herd in the world is on the increase. The Grand Trunk Pacific Railway Company will soon be operating a double service and I have every expectation of seeing this year's figures more than doubled.

It may be interesting to give an account of a little incident which occurred on the 18th November last, whilst driving with Mr. McTaggart and a party of taxidermists through the park to secure the head and hide of a lame buffalo which had been given by the department to the museum at Calgary.

As we came across a herd of wapiti they scattered through the timber. We stopped to admire their grace and beauty and in the hope of securing a closer view I commenced calling them. At the end of a few minutes, we were rewarded by a portion of the herd returning in answer to the call. One beautiful doe about six years of age came slowly towards us until she reached the conveyance. We made overtures of friendship, all the while calling. She came within reach and one of our party, Mr. Chisholm, touched the point of her nose. She then advanced closer and



Maligne Lake.



Natural Bridge near Field, B. C., Yoho Park.

it ended with my finally placing my arms round her neck, stroking her, while Mr. Chisholm, who occupied the rear seat with me, busied himself in securing a photograph of the animal's eye, a subject he had long wished to obtain.

All the animals in this park are in excellent condition with the exception of the antelope, which, I grieve to report, have decreased out of all proportion owing, no doubt, to the want of proper fodder for their maintenance. I have procured samples of all the weeds and grasses found on the antelope ranges south of the Red Deer and will compare them with the pasturage provided for those in captivity.

ELK ISLAND PARK.

This park is a very picturesque spot for spending the week end; a number of visitors, some fourteen hundred and sixty-four, spent many days in seeing the buffalo, moose, wapiti and deer grazing amongst their natural surroundings. The moose and wapiti can be seen at times swimming from the mainland to the beautifully wooded islands with which the lake is studded. In spite of the very wet season the fact that such a very large number visited the park when there were practically no roads is a sure indication that as this park is better known it will be more widely patronized. As there are practically no roads within the park except one to the superintendent's house, it will be necessary to lay out a number of drives and paths in various directions and also to lay out a camping and picnic ground at one end of the lake for the accommodation of the many visitors. The underbrush and fallen timber will be cleared off the larger islands. Boating facilities should also be provided. When these matters are attended to, I have no doubt that Elk Island Park will become one of the summer lake resorts of northern Alberta. It is only some thirty miles north-east of the city of Edmonton, a pleasant run by motor.

The animals in the park are in excellent condition.

WATERTON LAKE PARK.

This park will become the popular rendezvous of the people of southern Alberta. Practically no development work was done last year, but the present year will see many improvements and I sincerely hope steps will be taken to extend the boundaries so as to include a large portion of the Forest Reserve, which is lying dormant and adjacent to the United States Glacier National park, thus converting the whole forest and park area into a game and bird sanctuary.

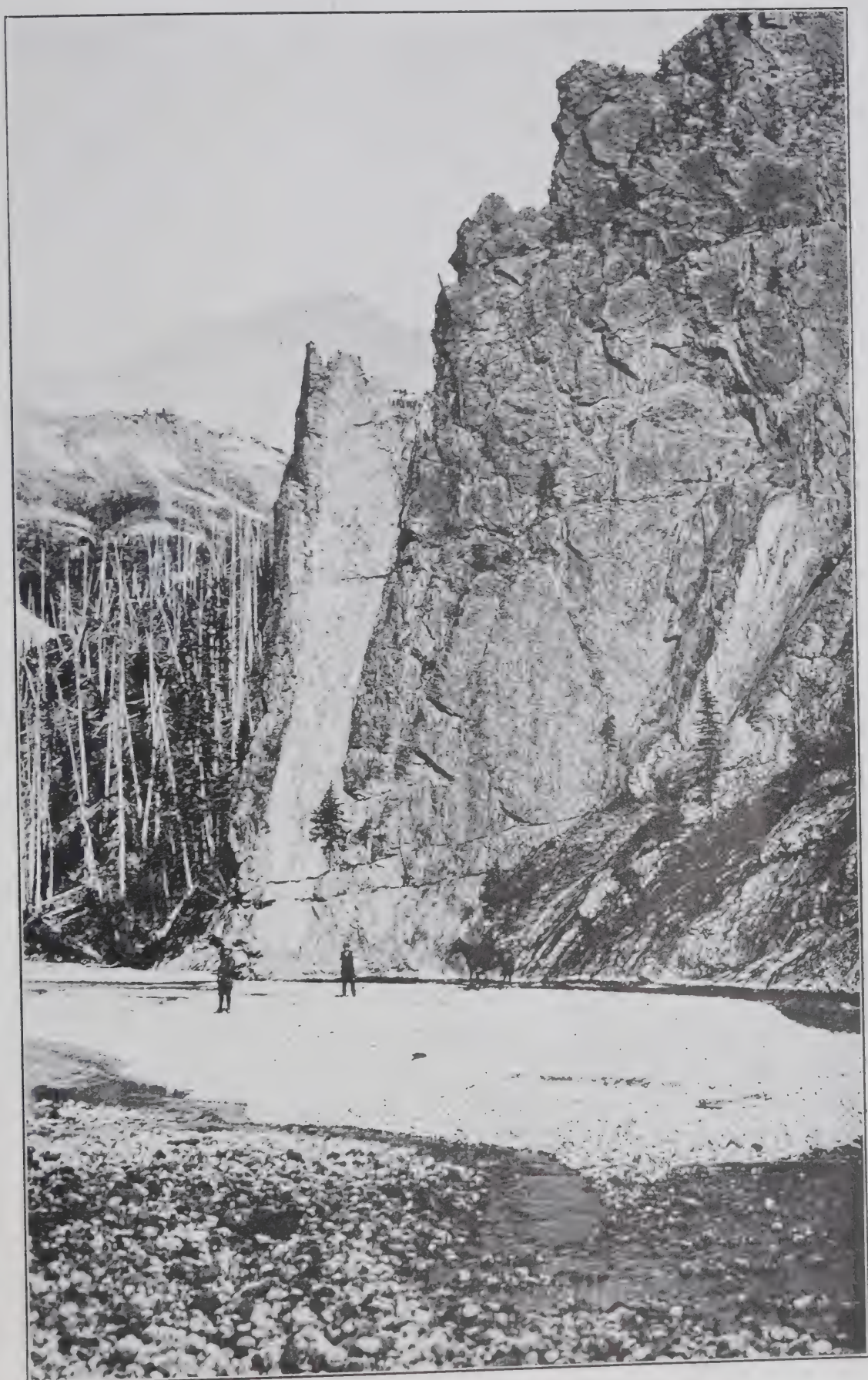
JASPER PARK.

This is destined to rank with the Rocky Mountains Park. The various scenic points are now within easy reach owing to the completion of the Grand Trunk Pacific through the park limits. Its possibilities are unlimited. There is a very good road through the length of the park, with many bridle paths taking one to the various scenic points.

The Canadian Northern railway has completed the greater portion of their road-bed, and when that line is finished, Jasper Park will be unique in having two trunk lines passing through the centre of it thus affording an excellent service to the tourist traffic.

The townsites within the park limits have been selected, the principal of which will be Fitzhugh. The townsites have been partially cleared and is awaiting the advent of the surveyors. The Grand Trunk Pacific propose erecting a magnificent hotel at Fitzhugh and one at Miette Hot Springs in the near future. The sites have been selected.

The Jasper Park collieries which are located at Pocahontas have completed their new tipples and are working a force of some two hundred and fifty men. They have



Fiddle Creek Canyon, Jasper Park.

also commenced to develop their coal seams on the north side of the Athabaska river to supply the Canadian Northern railway.

The Punch Bowl falls are but 3,500 feet from the Grand Trunk Pacific station of Pocahtontas, and can be easily reached by a bridle path which takes one to the mouth of the canyon, to take the tourist opposite the falls to obtain the finest view. From here the trail will wind upwards to reach the tableland above the fold of the road from the mines to the townsite in the fold of the hills nestling near the base of majestic Roche Miette. The panoramic view is magnificent, taking in a wide stretch of snow capped peaks with the majestic Athabaska flowing onward to the Arctic regions.

From Fitzhugh.

A bridle path has been partially cut out to reach Pyramid lake which, with its consort, Bear lake, lies at the foot of a wonderful vari-coloured mountain from its shape called Pyramid mountain. A number of goats can be seen frolicking on its rocky shores. This is a beautiful location for the erection of a chalet. There are boat-



Yellowhead Pass from Pyramid Lake, Jasper Park.

Photo. B. W. Mitchell.

ing facilities obtainable in addition to the healthful exercises of climbing the lesser mountains lying to the south of Pyramid. A climb of some twenty minutes brings one to the summit from which a magnificent panorama is obtainable. Temporary administration buildings have been erected in order to carry on the preliminary work incident to the development of the park.

A ferry which was in operation during the construction of the Grand Trunk Pacific railway was taken over and operated by the department. It is now out of commission, having served its purpose. A new ferry will be built at a point above and opposite Fitzhugh to give access to the trail leading to Maligne lake, the praises of which have already been sung. Lieut.-Col. S. Maynard Rogers has been appointed superintendent of Jasper Park and is now installed there and has already commenced to carry out the various improvements planned. I am pleased to see the revenue shows a substantial increase in Rocky Mountains Park, Jasper and Yoho Parks for the past year.

In conclusion, I wish to thank Mr. A. B. Macdonald, late superintendent of Rocky Mountains Park, for the able and valuable assistance rendered me in becoming familiar with the work which was being done under his supervision. I have also to thank Mr. H. E. Sibbald, chief fire and game warden, for his untiring efforts in carrying out his many onerous duties.

I also wish to convey to the various superintendents and the men engaged under them, my heartiest thanks for the way in which they have one and all, from the highest to the lowest, carried out the work entrusted to them in a painstaking and economical manner.

I have the honour to be, sir,
Your obedient servant,

P. C. BARNARD HERVEY,
Chief Superintendent Dominion Parks.

THE ROCKY MOUNTAINS PARK.

GENERAL DESCRIPTION.

The Rocky Mountains Park is the oldest as well as the largest of the Dominion National Parks. It was established by Act of Parliament in 1887, two years after



Vermilion Lake and Mt. Rundle, Rocky Mountains Park.

the last spike in the Canadian Pacific railway was driven at Craigellachie and the wonderful scenic area of the Canadian Rockies opened for the first time to the world. For centuries before, the beautiful Bow valley had lain behind its ramparts of rock,

unknown and almost unvisited. Stray bands of Indians from the plains, it is true, had wandered thither from time to time in search of the game with which the mountains abounded and with some appreciation of their beauty called them the Shining mountains, but the early explorers had for the most part traversed the passes to the north.

Almost co-incident with the completion of the line was the discovery of the Hot Springs. Trappers who had penetrated the Bow valley in search of game brought back stories of remarkable hot sulphur springs in the neighbourhood of Banff which they had been told by the Indians had great power in curing diseases. It was found upon investigation that these springs had undoubtedly marked curative qualities and the Government decided to retain both the springs and the region surrounding them under its own control and, by creating a National Park, to provide a pleasure ground and health resort for the people of Canada for all time.

The Bill passed the House in the session of 1887 and the park was called the Rocky Mountains Park of Canada. It originally covered 26 by 10 miles and included the whole of the valley lying between the Bourgeau and Sulphur mountains. In 1902 this area was enlarged to about 5,000 square miles but was reduced under the Forest Reserves and Parks Act of 1911 to 1,800 square miles.



Lake Minnewanka, eight miles from Banff, Rocky Mountains Park.

The park, as it stands at present, is in the form of an irregular isosceles triangle inclined to the northwest with its base at the foot of the Kananaskis range and having one side along the height of land. The Bow river takes its rise at Stephen at the ridge of the Divide and flows down through the centre of the park, dividing it roughly into two equal parts. To the northeast are the Sawback, Vermilion and Palliser ranges, to the east side the Kananaskis range and to the southwest the many snow-capped peaks crowded along the Divide. Banff and Laggan are the chief headquarters for the tourist. They differ widely in general character. At Banff one has the restful,

quiet scenery of a lovely mountain valley through which the Bow river winds on its way down to the plains. Although there are no true snow-peaks, several of the mountains which stand guard over the valley, Rundle, Cascade, and Edith, rise to over 9,000 feet, their bare, rocky summits towering over the darkly green forests which cling to their sides. Just below Tunnel mountain the Bow leaps in a fall of about 25 feet and, joining the turbulent Spray, swerves around the base of Mount Rundle towards the Gap.

About two miles to the west of the townsite up the Bow river, lie the Vermilion lakes, so called from their ruddy colour. These little lakes, which are a favourite resort for canoeists, are noted for their beautiful reflections, with picturesque mount Edith and the Sawback outlined in their mirror-like surface.

There are over 100 miles of carriage roads now completed throughout the park, making a large number of places of interest accessible in an easy and delightful way. A favourite excursion which requires but little time is the Spiral Drive up Tunnell mountain. The view from the summit is one of the finest to be obtained in the district. Another delightful drive is to lake Minnewanka. This beautiful sheet of water, which some one has said looks like a transplanted bit of the Mediterranean, has for a background majestic mount Aylmer, 10,335 feet in height. In this neighbourhood are a number of places of interest, including Aylmer canyon, the Devil's canyon and Ghost river. About thirty miles to the south is mount Assiniboine, familiarly known as the 'Matterhorn of the Rockies' on account of its striking resemblance to the famous Swiss mountain.

In the immediate vicinity of Banff the Hot Springs are one of the chief attractions. The water in these pools is warm even in the depths of winter and it is a common sight to see visitors enjoying a comfortable swim when the surrounding rocks are covered with icicles. Other items of interest are the Government museum, which contains a collection of specimens of the native fauna and flora, the zoo, the animal paddock containing buffalo, moose, elk, mountain sheep and goat and many other animals.

Laggan is the station for the Lake Louise district, reached by tramway or a three-mile drive through the forest. The scenery here is truly alpine, and the wildness and loneliness contrast sharply with the peaceful serenity of the Bow valley. Snow-capped peaks stand crowded thickly together, flanked by buttresses of jagged rock. Countless streams tumble down the mountain sides or leap in shining waterfalls hundreds of feet to the valleys below. High among the mountains lie numerous beautiful lakes, brilliant blue or emerald in colour, chief of which is the famous lake Louise. The fairy-like loveliness of this lake gives it a place among the masterpieces of nature. It has a unique beauty of setting with wild and lonely mountains shutting it in on three sides and snow-topped Victoria and Lefroy at its foot. In the brilliant blues and greens of its waters are reflected the white snows of Victoria glacier. To the right of lake Louise, reached by an easy trail from the Chalet, is a quaintly-shaped peak known as the Little Beehive and a little higher up mount St. Piran, both of which command fine views of the surrounding district and of the two little lakes in the clouds, lake Agnes and Mirror lake.

There are, perhaps, more points of interest to be reached from Laggan than from any other point in the mountains. One of the most delightful excursions is to Paradise valley, reached by a trail from the Chalet which crosses Saddle mountain, skirts mount Sheol and leads along the floor of the valley to little Mitre mountain, so-called from its resemblance to a bishop's hat. The eastern wall of the valley is formed by the gigantic cliffs of mount Temple which rise in steep precipices of from 4,000 to 5,000 feet in height. At their base, a sheer 5,000 feet from the overhanging summits, lies little lake Annette. The floor of the valley is carpeted with brilliant verdure through which run little shining streams which have come from the snow-peaks above and the sound of falling waters and the sight of meadows brilliant with flowers, complete a scene of idyllic beauty.

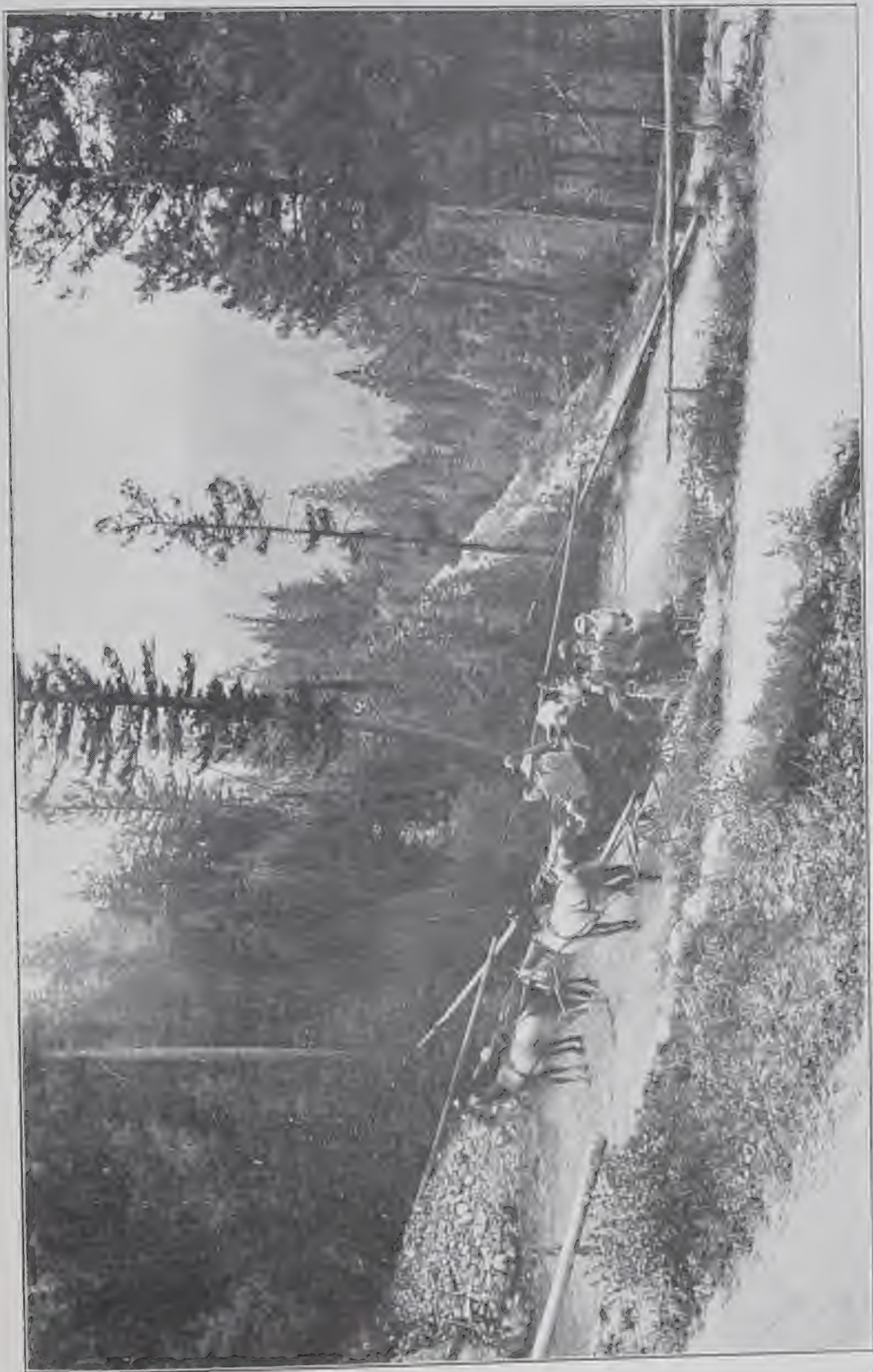
Parallel to Paradise valley lie Moraine lake and the valley of the Ten Peaks. Moraine lake has a grandeur of setting which, once seen, makes it unforgettable. The Ten Peaks, named for the ten numerals of the Stoney language, rise in a precipitous semi-circle from its shores. At the end of the lake lies a huge pile of glacial debris which gives its name to the lake. At the eastern end is a curiously-shaped peak, appropriately named the Tower of Babel, around which the trail leads to beautiful Consolation valley which lies at right angles to the valley of the Ten Peaks.

From Laggan, trails also lead to Pipestone river, to the Howse and Bow passes and, via Hector, to lovely Cataract valley, and lakes O'Hara and McArthur.



Moraine Lake, Valley of the Ten Peaks, near Laggan.

Among the charms of this region, and indeed of the whole park, the lover of nature will count the wild flowers. Strange as it may seem the flora of high mountain altitudes is the most beautiful and varied in the world, and in some of the Alpine meadows, lying almost at the snow line, one may find great gardens of fragrant blossoms massed together in such abundance that it is impossible to step without crushing them—flowers of every hue under heaven, violets, arnicas, adder's tongues, the delicate twin-flowers, lady's slippers, veronicas, which the Dutch call 'faithful and true,' the flaming devil's paint brush setting the hills on fire, the splendid red and gold columbine, and great masses of mountain heather, red, pink and white. It is impossible to describe the luxuriant profusion of these gardens which bloom above the clouds in the brief life of an Alpine summer.



Spiral Drive on Tunnel Mountain, Banff.

No. 2.

REPORT OF THE SUPERINTENDENT OF THE ROCKY MOUNTAINS
PARK.

BANFF, ALTA., March 31, 1913.

The Chief Superintendent of Dominion Parks.

Edmonton, Alta.

SIR,—I have the honour to submit my third annual report as Superintendent of the Rocky Mountains Park for the fiscal year ending March 31, 1913.

With the increased appropriation which we were fortunate enough to obtain, the work of developing the park has advanced at a rapid rate in all directions.

NEW BATH HOUSE AT THE CAVE AND BASIN.

Owing to an unavoidable delay caused by a modification of plans, and consequent change of architects, this work was not commenced until September 1. It proceeded uninterruptedly until the end of January, by which time the excavation and foundations were practically completed, together with the retaining wall of the pool.

The work was further delayed and rendered far more difficult, by the fact that, on the excavation reaching the proper depth, it was discovered that it would be necessary to support the entire building on piles. This was caused by an unusual formation of the subsoil which could not have been foreseen.

The pile-driving was satisfactorily completed and the concrete installed, but the season being far advanced, great care had to be exercised in protecting it from frost. This was successfully accomplished, and the work is now ready to receive the superstructure.

On completion, this magnificent bath-house, which promises to be the finest on the continent, will add greatly to the attractions of the park and should prove an important source of revenue.

In this connection I would respectfully recommend that, in the near future, improvements or rebuilding should be arranged for, in the bath-house at the upper Hot Springs. The buildings and appointments there are hopelessly out of date and inadequate, and are the cause of much adverse comment on the part of visitors.

SEWER AND WATER SYSTEMS.

Both sewer and water systems have been kept in good repair and upwards of fifty new connections applied for and made.

The water has been frequently tested by the Public Analyst at Ottawa and found to be constantly at a high state of purity.

Considerable trouble occurred during the very severe weather experienced this winter, in the freezing of the water mains and connections, but these were promptly dealt with by the electrical thawing machine. These difficulties point to the fact that in some places the pipes have been laid above the frost line, and this should be remedied in the ensuing year.

ROADS TRAILS AND BRIDGES.

Castle-Vermilion Road.—A large amount of work was completed on this road which will eventually reach from Calgary to Vancouver via the Windermere road in British Columbia, and the Banff-Laggan and Banff-Calgary roads in the park.

Preliminary and location surveys were run and the most advantageous location selected for the road. The right of way was cleared for the total length of the road, i. e., 9.05 miles. Somewhat over $1\frac{1}{2}$ miles of the road were graded to a width of 16 feet and the balance of the road to the Vermilion Summit was roughly graded to allow the passage of teams.

The bridges and culverts installed were of a permanent nature for an ultimate 16 feet width of road bed.

A steel bridge (two pony truss spans) was installed at Castle over the Bow river.

Throughout the length of the road all the heaviest work has been done and at the end of the season there was built at the Vermilion Summit a road which can readily and easily be completed to specifications. The greatest difficulties of building have been overcome and where the road bed is not completed the grading will greatly facilitate later work making camp sites accessible, and rendering easy the hauling of supplies.

On the Banff-Laggan road $1\frac{1}{2}$ miles of heavy rock were practically completed near Sawback, thus extending this road $6\frac{1}{2}$ miles from Banff.

In the Banff townsite, new roads totalling 1,000 feet by 40 feet wide have been constructed on Squirrel and Rabbit streets, and a new one about 300 feet long between Bear and Lynx streets.

Seven hundred and fifty feet of new road, 26 feet wide, and 498 feet, fifteen feet wide, have also been completed in Minnewanka townsite.

In addition to the above, a large quantity of necessary repair work was carried out, amounting in some cases to the practical remaking of the road. Included in this was the entire length of the road from Laggan station to lake Louise, and from Banff station to the Canadian Pacific Railway hotel.

Sufficient rock to metal the road from the station to the Bridge was quarried and carted to a convenient spot where the rock crusher can be installed so that early next summer this stretch may be rockmacked. This should be a great improvement.

This new rock crusher is turning out excellent work and the more important sidewalks have been remade with a finely crushed stone which is a great advance on the cinders previously used. I had some complaints of the dirtiness of the latter in dry weather, but next summer I hope to have them all replaced by the crushed rock walks. The total length of the sidewalks constructed was 4,500 feet, six feet wide.

TRAILS.

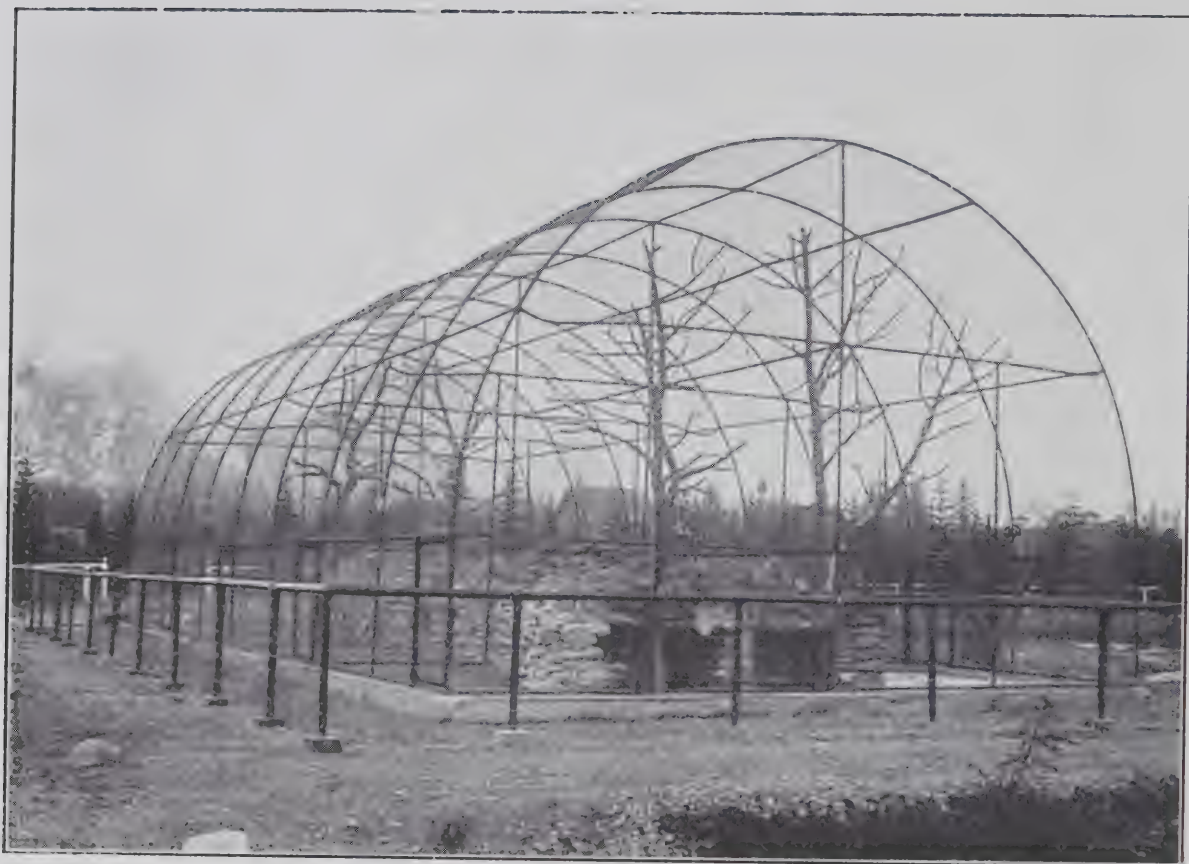
All the existing trails were cleared of fallen timber and repaired by the wardens while on their patrols.

A new trail was cut from Canmore to Whiteman's pass, a distance of 4 miles, at a cost of \$150.

The west end of Spray lake was connected with the Eau Claire wagon road by a new trail of 12 miles at a cost of \$300, and the Brewster Creek trail was extended to the head of Fatigue creek, a distance of 3 miles, at a cost of \$100. The latter trail opens up one of the most beautiful trips in the park from the summit of Simpson's pass over 20 miles of open country, at an elevation of between seven and eight thousand feet to the foot of mount Assiniboine.

TOTAL MILEAGE OF TRAILS IN PARK.

	Miles.
Spray to mount Assiniboine.	18
Banff to Spray lakes and Eau Claire wagon road.	42
Bow summit.	30
Banff to Fatigue creek.	19
Simpson to Pipestone trail.	6
Cascade (Sawback to Bankhead)	28



Animal cages, Banff 'Zoo.'



Mountain Lion in Banff 'Zoo'.

	Miles.
Mount Edith trail..	11
Lake Minnewanka trail..	14
Simpson pass to Simpson summit..	14
Canmore to Whiteman's pass.	4
Tunnel Mountain trail..	1½
Sulphur Mountain trail..	3½
	<hr/>
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TELEPHONE SYSTEM.

Twenty-six new telephones were installed which is a satisfactory increase in proportion to the expansion of the town, and the service given appears to meet with general approval. I am still of the opinion expressed in my last report, that the wires of this system should be carried underground and thus do away with an eyesore and a danger to the beautiful trees on the townsite.

LOTS AND BUILDINGS.

With the restricted area open for allotment, the number of applications for lots has necessarily been smaller, but we have accepted 115 of these during the year, in the Banff townsite. Until the newly surveyed portion is thrown open to the public, we have now no lots that are not taken up.

Building operations have again been active, a large number of residences have been erected, and the Banff Springs hotel, Lake Louise Chalet, and the King Edward hotels have all added large additions to the previously existing buildings.

The following table shows the lot applications, and gives an approximate value of improvements during this and the two preceding years:—

	1910-11	1911-12	1912-13
Lot applications, Banff.	50	170	115
" " Minnewanka.	13	8	.....
" " Canmore.	46	37	22
Improvements—			
Banff.	\$212,000	\$640,000	\$750,000
Lake Louise		425,000	200,000

THE ZOO.

This has proved one of the most popular attractions to visitors. A considerable number of additions have been made during the year. Among these are included:

2 ring-tailed monkeys,	1 Reeves pheasant,
1 coyote,	1 Lady Amherst pheasant,
1 pair of pea-fowl,	1 pair golden pheasants,
1 " racoons,	1 pair swans,
1 " black neck pheasants,	1 polar bear,
1 " common pheasants.	1 black bear.

The polar bear was obtained by exchange for two of our moose; the black bear is a cub which was captured at Laggan when his mother was shot by one of the game wardens. The coyote was presented, and the remaining specimens were purchased.

With one or two exceptions, all the animals and birds under my care have done well this year. The few losses sustained being attributable to old age or from natural causes which it was not in my power to obviate.

ANIMAL PADDOCKS.

The buffalo are in excellent condition, and I have to report an increase of three, making a total of twenty-eight now in the herd.

The moose have also done well, though one bull was found dead from unexplained causes, probably old age. There was an increase of one calf.

Among other increases were three elk, two male deer, two Persian sheep and five Angora goats.

Though one of the Rocky Mountain sheep died, from what an autopsy showed to be pneumonia, three more fine specimens were captured in a trap corral made by the game wardens. There are two adult ewes and one ewe lamb which have rapidly become used to their new surroundings and are active and healthy.

One of the elk bucks which had become too old and was losing its teeth, though still a fine specimen, was killed and presented to the Victoria Memorial Museum at Ottawa.

A pair of Rocky Mountain goat kids were obtained at the same time as the polar bear in exchange for one Rocky Mountain ram. They are charming, playful little creatures and should be a great acquisition.



Bears hunting for food near Banff.

Six yak, originally presented to the Dominion Government by the Duke of Bedford, were presented by the former to this park. They were safely conveyed here from the Experimental Farm at Brandon and are now in a healthy and flourishing condition. Their quaint appearance causes them to be objects of much interest to visitors.

I would suggest that it would be an interesting experiment to attempt to cross one of our Buffalo bulls with one of these yak cows.

FIRE AND GAME PROTECTION.

The system now in vogue has developed satisfactorily and shown excellent results. During the month of June, which was very dry and hot, twenty-one fires occurred. The most important one started immediately behind the new Cottage hotel at Laggan and was probably caused by a workman throwing down a lighted match or cigarette end. The brush being very dry and a great deal having been left on the ground from clearings it was found to be impossible to get control of this fire until



Curling Rink, Banff.



Toboggan Slide at Banff.

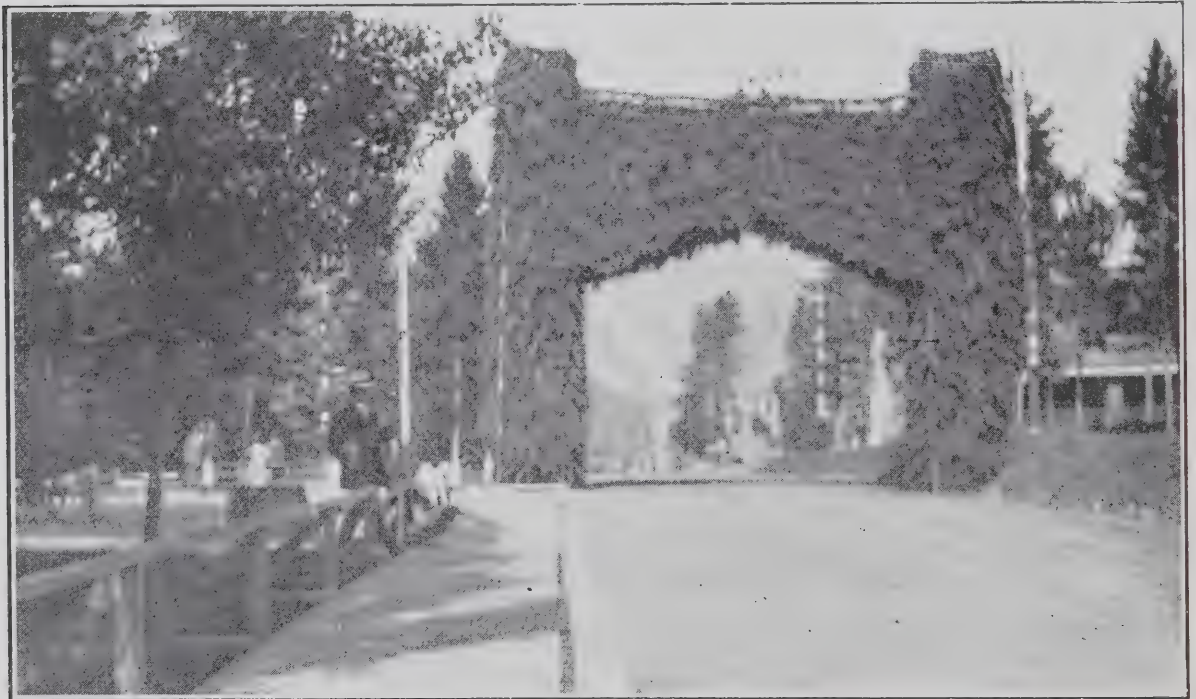
the wind and sun went down. An area of between 200 and 300 acres was burnt, but fortunately in such a situation that it cannot be seen from the hotel or from the carriage road. In fighting this fire, we had the assistance of over 400 men from the construction works of the Banff and Laggan hotels, who worked during the whole afternoon and all night.

Of the other fires, fifteen were started along the Canadian Pacific railway right of way and, with the exception of two, were extinguished before much damage was done. These were all attributed to sparks from engines and the Canadian Pacific Railway Company have now taken the work of patrolling their lines to watch for fires. This will relieve our men of considerable work.

Four fires got beyond control of the Calgary Power Company while they were engaged in clearing at lake Minnewanka, one burning ten acres and the others about one acre.

Considering the very large amount of ground to be covered, the preservation of the game was carried on most successfully, as is evidenced by the increasing numbers and fearlessness of all wild life in the park.

Large numbers of sheep and goats may now be seen at any time grazing close to the roads. Partridges are plentiful and it was a common sight this winter to see deer wandering through the outlying streets of Banff.



Arch Erected for Visit of Their Royal Highnesses the Duke and Duchess of Connaught and Princess Patricia, to Banff, 1912.

A great many coyotes were killed by the wardens and, apart from the Bow valley where they seem to congregate along the right of way and around the towns, they are practically extinct.

With the exception of one case, in which the guilty party was convicted and fined, there has been very little poaching, but in three instances guns were confiscated when their owners were found carrying them unsealed.

BANFF AS A WINTER RESORT.

The development of Banff as a winter resort should now receive the earnest attention of the department. The Canadian Pacific Railway Company have announced their intention of keeping their hotel open the whole year round in future, and I am informed will co-operate with the Government in this direction.

The facilities for winter sports, such as skating, snow-shoeing, curling, skiing and tobogganing are equal, if not superior, to those at such places as St. Moritz and Davos Platz, and there seems to be no reason why the number of our visitors during the winter should not approach the summer record.

There is a magnificent site for a bob-sleigh run, starting from the Hot Springs, and I would strongly recommend that this should be constructed this autumn. This would be a source of revenue.

There is already a Winter Sports Club and a Curling Club in town, and these should be assisted by the Government. The erection of a large covered rink (from which a fair revenue would be obtained) would be the best form that this assistance would take.

VISIT OF HIS ROYAL HIGHNESS THE DUKE OF CONNAUGHT.

The park was honoured by a visit of their Royal Highnesses the Duke and Duchess of Connaught and Princess Patricia, during their tour through the Dominion in September. The Royal party's arrangements being suddenly altered only 24 hours' notice of their arrival was received; nevertheless, the town of Banff was prettily decorated and illuminated in that time. On leaving, Their Royal Highnesses signified that they had derived great pleasure from their stay which extended over a week.

In conclusion, I wish to express my appreciation of the loyalty and enthusiasm which all the members of my staff have displayed in their work, and of the ready help and guidance afforded me by yourself and the Commissioner.

I would also mention that the officers and men of the Royal Northwest Mounted Police have supported my efforts to maintain law and order within my jurisdiction.

I have the honour to be, Sir,

Your obedient servant,

A. B. MACDONALD,

Superintendent of Rocky Mountains Park.

No. 2a.

REPORT OF THE CURATOR OF THE GOVERNMENT MUSEUM, BANFF, ALTA.

BANFF, ALTA., April 1, 1913.

The Superintendent of Rocky Mountains Park,
Banff, Alta.

SIR,—I have the honour to submit herewith my eighth annual report of the Rocky Mountains Park Museum for the year ending March 31, 1913.

The number of visitors shows an increase over the previous year. Many did not register.

During the summer of 1912 I spent some time collecting specimens, making additions to the birds and mammals. I also attended to visitors at the museum.

The following additions were made to the exhibits during 1912:—

A remarkable concretion discovered and brought in over rough ground by W. Peyto, game guardian. It weighs 233 pounds, and is almost symmetrically round, with well marked rings or grooves encircling it.

An exhibit of grains and grasses artistically arranged was received from the Immigration Branch at Winnipeg.

I kept up my fortnightly visits in connection with the Meteorological Station on Sulphur mountain, both summer and winter, taking the opportunity on these trips during the summer of collecting insects, etc.

During the past winter, I arranged some material for the museum and did considerable work on making up a return of the rain and snowfall and other data for Banff, during the past twenty years or so.

I would like to again call your attention to the fact that the number of visitors to the museum and the interest they take in the exhibits is steadily increasing, so that I think something more ought to be done (outside of the Curator collecting) in getting together a more representative collection, or in expending more money on the museum work than heretofore.

I have the honour to be, sir,
Your obedient servant,

N. B. SANSON,
Curator, Rocky Mountains Park Museum.



Annual Indian Sports Day at Banff.

NUMBER of visitors registered at the Government Museum, Banff, Alta., from April 1, 1912, to March 31, 1913.

Canada	9,463	France	23
Newfoundland.. . . .	3	China.. . . .	10
Alaska	2	Japan.. . . .	7
United States.. . . .	3,474	Italy.. . . .	8
Buenos Ayres.. . . .	2	Silicia.. . . .	5
Rio Janeiro (Argentine Republic) ..	4	Galicia.. . . .	1
Phillipine Islands	1	Russia.. . . .	4
Haiwaian Islands.. . . .	11	Finland.. . . .	8
Mexico.. . . .	3	Hungary.. . . .	2
England.. . . .	640	Persia.. . . .	1
Scotland.. . . .	191	Joppa.. . . .	2
Ireland.. . . .	64	Botavia	1
Wales.. . . .	12	Egypt.. . . .	3
Isle of Man.. . . .	1	Norway	6
Australia	80	Sweden.. . . .	8
New Zealand	49	Denmark.. . . .	6
South Africa.. . . .	18	Bulgaria.. . . .	2
Africa (Bulawavo).. . . .	3	Servia.. . . .	1
India.. . . .	7	South Pacific Islands	1
Bermuda	3	Switzerland.. . . .	6
Jamaica.. . . .	1	Austria.. . . .	5
Ceylon.. . . .	2	Budapest.. . . .	1
Fiji.. . . .	1		
Straits Settlements.. . . .	1		
Germany.. . . .	34	Not registered	14,189
Holland.. . . .	4		1,000
Belgium.. . . .	3		
		Total.. . . .	15,189



Winter in the Rocky Mountains Park. Snow Mushrooms.



Anemones in the snow, April 20, 1912, on Tunnel Mt., Rocky Mountains Park.

METEOROLOGICAL TABLES.

MAXIMUM and Minimum temperatures and the general state of the weather between April 1, 1912, and March 31, 1913.

THERMOMETER READINGS.			
Date.	Maximum for day.	Minimum for day.	Weather, etc.
1912			
April 1....	48.7	35.4	Cloudy, fine day.
" 2....	55.6	40.0	Fair, squally, very fine day and night.
" 3....	47.2	36.2	Cloudy, light rain, fine day.
" 4....	42.3	29.4	Cloudy, snow.
" 5....	36.0	25.2	Fair, light snow.
" 6....	45.1	17.0	Cloudy, gale, fine sunrise, Juncos.
" 7....	46.3	30.9	Cloudy, fine day.
" 8....	55.5	28.7	Fair, very fine day, ground bees.
" 9....	56.1	28.3	Fair, very fine day.
" 10....	59.1	27.9	Fair, very fine day, geese flying NW.
" 11....	34.3	32.2	Cloudy, rain and snow.
" 12....	40.8	30.8	Cloudy.
" 13....	44.4	30.9	Cloudy, snow flurries, ducks flying NW
" 14....	52.9	27.2	Fair, very fine day.
" 15....	48.7	27.2	Cloudy.
" 16....	39.7	29.5	Cloudy, frogs piping, grouse drumming.
" 17....	46.1	25.2	Cloudy.
" 18....	49.2	29.0	Cloudy, light rain.
" 19....	49.2	27.0	Fair.
" 20....	48.0	23.5	Cloudy, fine day, snow flurries.
" 21....	53.3	24.8	Fair, fine day.
" 22....	51.0	22.0	Fair.
" 23....	49.2	32.0	Fair, cloudy, snow flurries, Vireo.
" 24....	50.6	32.0	Fair, fine day, mountain bluebirds.
" 25....	52.6	28.0	Fair, snow flurries, hail.
" 26....	49.2	28.5	Cloudy, light snow.
" 27....	51.2	28.5	Fair, hail.
" 28....	49.6	29.8	Cloudy.
" 29....	51.9	29.0	Cloudy, light rain.
" 30....	38.8	33.5	Cloudy, rain and snow
May 1....	41.0	31.8	Cloudy, light snow.
" 2....	46.0	30.0	Cloudy, snow.
" 3....	51.4	29.2	Fair, light rain and snow; horned grebe, mountain gopher out.
" 4....	52.4	26.2	Fair, fine day.
" 5....	56.0	27.0	Fair, ruby-crowned kinglet.
" 6....	62.1	31.3	Fair, perfect day; kingfisher, moths.
" 7....	67.2	32.3	Fair, perfect day; blueberry in flower.
" 8....	67.5	45.8	Fair, very fine day, strong wind.
" 9....	52.4	33.8	Fair, rain and snow, thunder.
" 10....	56.2	26.6	Fair, very fine day.
" 11....	61.2	24.4	Fair, perfect day; white-crowned sparrows, buffalo berry in flower.
" 12....	68.2	26.2	Fair, perfect day.
" 13....	74.5	28.9	Fair, perfect day, calypso borealis in flower, large black ants.
" 14....	76.9	31.9	Fair, perfect day, rivers muddy.
" 15....	74.1	31.4	Fair, perfect day.
" 16....	66.1	46.4	Fair, evening a gale, very fine day, light rain.
" 17....	61.2	36.8	Fair, strong wind, fine day.
" 18....	56.3	35.6	Cloudy, fine day.
" 19....	48.7	36.2	Cloudy, rain.
" 20....	45.6	38.7	Cloudy, Audubon's warbler.
" 21....	58.0	34.2	Cloudy, fine day, rain at night.
" 22....	48.3	40.0	Cloudy, rain.
" 23....	58.7	36.9	Cloudy.
" 24....	63.2	40.5	Fair, very fine day.
" 25....	67.7	31.9	Fair, very fine day.
" 26....	63.4	42.2	Cloudy, rain.
" 27....	60.1	46.7	Cloudy, very fine day.
" 28....	55.9	38.3	Fair, gale evening, rain.
" 29....	57.3	33.4	Cloudy, rain.
" 30....	55.4	30.1	Fair.
" 31....	56.8	29.6	Fair.

MAXIMUM and Minimum temperatures and the general state of the weather between April 1, 1912, and March 31, 1913.—*Continued.*

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum for day.	Minimum for day.	
1912.			
June 1....	56·7	32·0	Fair, fine day.
" 2....	52·1	39·7	Fair.
" 3....	54·7	32·8	Fair.
" 4....	55·9	33·3	Fair, rain and snow.
" 5....	58·4	33·2	Fair, fine day.
" 6....	68·2	27·4	Fair, perfect day.
" 7....	78·0	30·2	Fair, perfect day ; many plants in flower, swallows.
" 8....	78·2	36·8	Fair.
" 9....	72·0	43·9	Fair, very fine day ; smoke.
" 10....	73·4	31·8	Fair, very fine day ; smoke.
" 11....	77·5	39·8	Fair, perfect day.
" 12....	73·3	45·7	Fair, thunder in afternoon.
" 13....	62·1	48·3	Cloudy, rain.
" 14....	63·5	39·4	Cloudy, rain.
" 15....	48·7	37·3	Cloudy, heavy rain, thunder.
" 16....	66·3	44·3	Fair, fine day, rain.
" 17....	74·0	39·0	Fair, very fine day, thunder.
" 18....	80·3	40·2	Fair, perfect day.
" 19....	81·4	42·2	Fair, perfect day.
" 20....	83·4	44·7	Fair, perfect day.
" 21....	84·5	44·2	Fair, rain, thunder, fine day.
" 22....	84·1	47·6	Fair, very fine day, thunder and light rain.
" 23....	84·7	50·8	Fair, perfect day.
" 24....	85·7	52·3	Fair, very fine day.
" 25....	84·2	49·0	Fair, fine day, rain.
" 26....	83·1	46·4	Fair, very fine day, rain.
" 27....	73·4	47·5	Cloudy, thunder, rain.
" 28....	62·4	44·0	Cloudy.
" 29....	60·3	34·8	Cloudy, rain.
" 30....	51·0	44·2	Cloudy, rain.
July 1....	58·5	43·2	Cloudy.
" 2....	47·6	41·5	Cloudy, rain.
" 3....	61·4	37·9	Cloudy.
" 4....	69·2	42·0	Cloudy, light rain.
" 5....	58·1	45·6	Cloudy, rain.
" 6....	57·0	42·3	Cloudy, rain.
" 7....	54·1	45·2	Cloudy, rain.
" 8....	58·3	40·3	Cloudy, rain.
" 9....	63·7	43·8	Cloudy, rain.
" 10....	63·3	42·2	Cloudy, fine day, rain.
" 11....	61·6	45·7	Cloudy, rain.
" 12....	64·3	40·3	Cloudy.
" 13....	46·5	40·2	Cloudy, rain.
" 14....	59·9	33·8	Cloudy, fine day.
" 15....	69·7	44·2	Fair, fine day.
" 16....	59·0	43·9	Cloudy, rain.
" 17....	63·5	43·2	Fair, very fine day.
" 18....	74·4	35·3	Fair, perfect day.
" 19....	73·3	40·8	Fair, very fine day, thunder.
" 20....	60·4	47·9	Cloudy, fine day, rain.
" 21....	71·6	41·3	Fair, very fine day, thunder and lightning.
" 22....	65·0	44·0	Cloudy, thunderstorm.
" 23....	60·3	44·6	Cloudy, rain.
" 24....	48·9	45·4	Cloudy, rain.
" 25....	66·3	38·2	Fair, fine day.
" 26....	66·1	36·9	Cloudy, rain.
" 27....	64·4	37·0	Fair, very fine day.
" 28....	72·4	38·6	Fair, perfect day.
" 29....	77·5	38·2	Fair, perfect day.
" 30....	82·9	39·3	Fair, perfect day.
" 31....	76·0	44·3	Fair, thunderstorm.
Aug. 1....	75·0	46·9	Cloudy, rain.
" 2....	68·2	45·0	Fair.
" 3....	69·9	46·5	Cloudy.

MAXIMUM and Minimum temperatures and the general state of the weather between April 1, 1912, and March 31, 1913.—*Continued.*

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum for day	Minimum for day.	
1912.			
Aug. 4. . .	67.7	52.0	Fair, fine day.
" 5. . . .	56.3	40.5	Cloudy, rain.
" 6. . . .	58.5	34.0	Cloudy.
" 7. . . .	67.5	44.0	Fair; very fine day.
" 8. . . .	76.1	39.9	Fair, very fine day.
" 9. . . .	74.4	45.6	Fair, very fine day.
" 10. . . .	65.2	49.4	Cloudy, fine day and very light rain.
" 11. . . .	56.1	44.8	Cloudy, rain.
" 12. . . .	61.4	41.7	Fair, very fine day.
" 13. . . .	65.5	32.0	Fair, very fine day.
" 14. . . .	73.1	34.2	Fair, perfect day.
" 15. . . .	71.4	37.9	Fair, rain thunder and lightning.
" 16. . . .	49.1	42.3	Cloudy, rain.
" 17. . . .	48.0	35.1	Cloudy, rain, thunder.
" 18. . . .	63.2	36.7	Fair, fine day.
" 19. . . .	68.6	36.3	Fair, very fine day.
" 20. . . .	73.4	39.5	Fair, very fine day.
" 21. . . .	76.3	40.5	Fair, very fine day.
" 22. . . .	79.1	46.2	Fair, very fine day.
" 23. . . .	73.8	52.2	Fair, fine day.
" 24. . . .	62.4	47.9	Cloudy, rain.
" 25. . . .	53.3	40.8	Fair, fine day, rain.
" 26. . . .	59.1	42.0	Cloudy, fine day.
" 27. . . .	62.0	43.3	Cloudy, rain.
" 28. . . .	52.0	39.3	Cloudy, fine day, rain.
" 29. . . .	48.9	33.0	Cloudy, fine day, rain.
" 30. . . .	49.9	35.5	Cloudy.
" 31. . . .	50.1	38.2	Cloudy, rain.
Sept. 1. . . .	48.9	35.2	Cloudy, rain.
" 2. . . .	45.0	32.0	Cloudy, light rain.
" 3. . . .	46.0	34.8	Cloudy, rain.
" 4. . . .	53.3	28.0	Fair, fine day.
" 5. . . .	45.2	37.5	Cloudy, rain.
" 6. . . .	55.9	33.8	Fair, fine day.
" 7. . . .	59.9	41.0	Fair, fine day.
" 8. . . .	54.3	41.9	Cloudy, rain.
" 9. . . .	58.8	32.3	Fair, very fine day.
" 10. . . .	68.5	30.0	Fair, perfect day, leaves on trees turning.
" 11. . . .	73.1	33.3	Fair, perfect day.
" 12. . . .	65.2	37.8	Fair, fine day.
" 13. . . .	52.9	35.4	Cloudy, light, rain.
" 14. . . .	55.6	24.8	Fair, perfect day.
" 15. . . .	63.3	24.8	Fair, perfect day.
" 16. . . .	67.8	30.1	Fair, perfect day.
" 17. . . .	64.2	32.9	Fair, perfect day.
" 18. . . .	56.1	40.7	Cloudy, rain.
" 19. . . .	49.9	30.8	Cloudy.
" 20. . . .	58.3	26.9	Fair, perfect day.
" 21. . . .	65.4	28.3	Fair.
" 22. . . .	38.0	32.2	Cloudy, rain and snow.
" 23. . . .	36.8	28.8	Cloudy, light rain and snow.
" 24. . . .	43.4	25.8	Cloudy.
" 25. . . .	40.0	32.9	Cloudy, rain and snow.
" 26. . . .	46.9	30.0	Cloudy.
" 27. . . .	47.0	30.9	Cloudy.
" 28. . . .	56.3	23.4	Fair, perfect day.
" 29. . . .	64.8	27.8	Fair, perfect day.
" 30. . . .	58.8	33.8	Cloudy, fine day.
Oct. 1. . . .	55.1	38.8	Cloudy, rain.
" 2. . . .	55.3	41.7	Fair, very fine day.
" 3. . . .	52.1	43.8	Cloudy, rain, strong wind early morning.
" 4. . . .	40.3	31.2	Cloudy, rain and snow.
" 5. . . .	39.1	29.3	Cloudy.
" 6. . . .	49.4	20.4	Fair, perfect day.

MAXIMUM and Minimum temperatures and the general state of the weather between April 1, 1912, and March 31, 1913.—*Continued.*

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum per day.	Minimum per day.	
1912.			
Oct. 7 ..	50·9	29·6	Fair.
" 8...	37·0	32·2	Cloudy, rain and snow.
" 9....	41·9	25·8	Fair, very fine day. ^{11M}
" 10....	46·0	33·7	Cloudy, strong wind evening.
" 11....	48·0	28·2	Fair, very fine day.
" 12....	52·3	25·8	Fair, perfect day.
" 13....	55·3	33·2	Fair, perfect day.
" 14. . .	58·0	27·3	Fair, very fine day.
" 15....	56·8	31·2	Fair, very fine day.
" 16....	44·8	39·6	Cloudy, rain.
" 17....	40·0	33·8	Cloudy, thunder and lightning, light rain and snow.
" 18....	39·0	30·5	Cloudy, fine day.
" 19....	34·7	26·2	Cloudy, snow.
" 20....	34·8	20·2	Fair, light snow.
" 21....	33·0	15·8	Fair, fine day.
" 22....	37·2	27·6	Cloudy.
" 23....	35·3	24·8	Fair, fine day, snow.
" 24....	36·6	26·0	Fair.
" 25....	42·0	24·8	Cloudy.
" 26....	39·8	29·8	Fair, snow.
" 27....	38·2	18·9	Fair, perfect day.
" 28....	35·3	25·3	Cloudy, snow, good sleighing on Hot Springs road.
" 29....	31·1	8·2	Fair, fine day.
" 30....	34·8	4·9	Fair, perfect day.
" 31....	37·8	7·2	Fair.
Nov. 1. . .	33·0	20·9	Cloudy, strong wind.
" 2....	38·2	17·3	Fair, fine day.
" 3....	38·2	26·7	Cloudy.
" 4....	36·0	19·3	Fair, fine day.
" 5....	38·9	24·0	Fair, fine day.
" 6....	37·4	24·3	Fair.
" 7....	36·0	26·8	Fair, fine day.
" 8....	31·2	24·9	Cloudy, rain and snow.
" 9....	34·1	26·5	Cloudy, first sleighing, but indifferent.
" 10....	34·0	19·2	Cloudy, good sleighing, snow.
" 11....	36·9	25·7	Cloudy.
" 12....	38·0	28·2	Fair, fine day, chinooking.
" 13....	47·8	30·2	Cloudy, light rain and snow, strong wind, sleighing indifferent.
" 14....	32·2	25·2	Fair, perfect day.
" 15....	26·7	4·7	Fair, perfect day.
" 16....	28·0	15·0	Fair, gale.
" 17....	43·0	25·0	Fair, gale.
" 18....	45·0	36·2	Cloudy, gale morning, no sleighing.
" 19....	38·2	33·0	Cloudy, rain.
" 20....	34·1	27·0	Cloudy.
" 21....	37·7	28·7	Cloudy, light snow.
" 22....	40·4	29·2	Cloudy.
" 23....	44·7	32·6	Cloudy, evening, gale.
" 24....	32·2	22·8	Fair, snow, sleighing, but indifferent.
" 25....	25·2	5·1	Fair.
" 26....	21·9	- 3·7	Fair.
" 27....	33·0	14·4	Cloudy, strong wind.
" 28....	28·0	12·7	Fair, fine day.
" 29....	24·3	14·2	Fair.
" 30....	27·0	12·8	Fair.
Dec. 1....	23·0	2·2	Fair.
" 2....	30·3	20·1	Cloudy.
" 3....	27·7	23·9	Cloudy, light snow.
" 4....	22·1	13·0	Fair, fine day.
" 5....	27·2	8·2	Fair, very fine day.
" 6....	34·2	19·9	Fair, very fine sunset.
" 7....	32·2	23·4	Fair, fine day.
" 8....	27·3	17·8	Fair, gale.
" 9....	30·0	17·0	Fair, no sleighing.

MAXIMUM and Minimum temperatures and the general state of the weather between
April 1, 1912, and March 31, 1913.—*Continued.*

Date.	THERMOMETER READINGS.		Weather, &c.
	Maximum for day.	Minimum for day.	
1912.			
Dec. 10 ..	12.2	- 4.0	Fair, fine day.
" 11....	20.0	0.2	Fair, gale by evening.
" 12....	26.8	17.3	Fair, very fine day.
" 13....	33.8	18.0	Fair, very fine mild day.
" 14....	30.7	25.5	Fair, light snow, very fine day.
" 15....	13.8	- 1.2	Cloudy.
" 16 ..	25.5	5.0	Fair, fine day.
" 17....	27.0	11.5	Fair, fine day.
" 18....	31.9	20.3	Cloudy, light snow, strong wind.
" 19....	24.9	20.0	Fair, fine day.
" 20....	21.5	14.0	Fair.
" 21....	23.0	0.0	Fair.
" 22....	27.8	13.8	Fair, very fine day.
" 23....	32.7	20.2	Cloudy.
" 24 ..	25.6	15.0	Fair.
" 25....	23.2	- 0.5	Cloudy.
" 26....	37.1	22.0	Cloudy, gale evening.
" 27....	29.9	25.2	Cloudy, snow, sleighing, but indifferent.
" 28....	23.2	16.9	Cloudy.
" 29....	23.4	20.3	Cloudy, snow flurries.
" 30....	27.0	17.2	Cloudy.
" 31....	29.6	23.9	Cloudy, snow.
1913.			
Jan. 1....	15.0	8.8	Fair, strong wind evening.
" 2....	29.2	13.2	Cloudy, snow.
" 3....	20.8	11.0	Cloudy, snow, good sleighing. 7 to 16 inches on ground.
" 4....	5.2	-10.5	Fair, ice on Bow about 18 inches.
" 5....	- 3.0	-31.4	Fair, lake Minnewanka frozen over.
" 6....	2.2	-18.1	Fair, strong wind.
" 7....	12.1	- 1.9	Fair; gale, snow drifting.
" 8....	21.3	6.2	Fair.
" 9....	- 6.0	-15.1	Fair.
" 10....	- 3.6	-15.2	Fair, light snow.
" 11....	- 9.1	-33.4	Fair, ice on Bow about 20 inches.
" 12 ..	- 6.0	-31.2	Fair.
" 13....	10.0	-11.2	Cloudy, light snow, strong wind, snow drifting.
" 14....	22.2	5.3	Fair, snow flurries, fine day.
" 15....	11.0	-15.1	Cloudy, snow, strong wind evening.
" 16....	- 6.0	-18.8	Fair, snow.
" 17....	17.2	-20.4	Cloudy, light snow, fine day.
" 18....	-10.5	-21.1	Fair, ice on Bow about 23 inches, average 11 inches snow on ground.
" 19....	- 8.8	-33.4	Fair, very cold.
" 20....	12.0	-16.5	Cloudy, snow flurries.
" 21....	16.6	7.2	Fair, very fine day, ice on Bow 27½ inches.
" 22....	21.4	- 8.2	Fair, very fine day.
" 23....	25.1	16.3	Cloudy, very fine day.
" 24....	32.1	19.2	Cloudy, fine day, strong wind.
" 25....	37.0	27.9	Cloudy, fine day.
" 26....	35.3	23.9	Fair, very fine day.
" 27....	40.1	30.1	Cloudy, very fine mild day.
" 28....	40.8	31.1	Fair, fine day, gale.
" 29....	40.2	23.2	Fair, fine day, snow.
" 30....	27.1	6.9	Fair, very fine day.
" 31....	34.3	19.5	Fair, very fine day.
Feb. 1....	28.9	14.4	Fair, fine day.
" 2....	24.2	13.5	Cloudy, snow flurries.
" 3....	- 1.0	- 9.1	Fair.
" 4....	- 3.0	-34.0	Fair, calm, clear.
" 5....	8.9	-23.3	Fair, clear.
" 6....	9.3	-26.7	Fair, clear, very fine, calm.
" 7....	16.3	-22.2	Fair, calm and clear.
" 8....	25.0	-11.0	Fair, very fine day.
" 9....	28.0	11.9	Fair, fine day, strong wind.
" 10....	25.4	-10.0	Fair, perfect day.
" 11....	28.2	0.4	Fair, perfect day.

MAXIMUM and Minimum temperatures and the general state of the weather between April 1, 1912, and March 31, 1913.—*Continued.*

THERMOMETER READINGS.			Weather, &c.
Date.	Maximum for day.	Minimum for day.	
1913.			
" 12 ..	36.0	18.2	Cloudy.
" 13....	41.1	27.2	Fair, sleighing becomes bad.
" 14....	39.5	29.8	Cloudy.
" 15....	41.0	35.3	Cloudy, chinook, light rain.
" 16....	39.8	32.8	Cloudy, rain and snow.
" 17....	31.1	25.6	Cloudy, snow.
" 18....	30.0	15.2	Fair.
" 19....	23.3	1.2	Cloudy, snow flurries.
" 20....	22.2	- 0.3	Cloudy, snow flurries.
" 21....	23.1	5.5	Cloudy.
" 22....	22.3	-11.2	Fair, very fine day, ice on Bow river 32 inches thick.
" 23....	19.2	8.0	Cloudy.
" 24....	21.2	- 8.9	Fair, fine day.
" 25....	11.0	-14.5	Fair, perfect day.
" 26....	7.9	-25.8	Fair, perfect day.
" 27....	15.0	-21.5	Fair, very fine day.
" 28....	21.8	- 3.8	Fair.
Mar. 1....	37.4	3.2	Fair, very fine day.
" 2....	37.2	24.0	Cloudy.
" 3....	39.0	26.7	Cloudy, fine day.
" 4....	39.8	22.0	Fair, very fine day.
" 5....	40.2	24.4	Cloudy.
" 6....	45.0	24.4	Fair, very fine day, flies about outside.
" 7....	47.3	23.2	Fair, very fine day, sleighing only on sheltered roads.
" 8....	42.2	27.3	Fair, snow, very fine day.
" 9....	39.9	23.4	Fair, very fine day, snow about 8 inches on ground.
" 10....	36.2	21.2	Cloudy, light snow, no sleighing.
" 11....	34.8	15.8	Cloudy, fine day.
" 12....	19.2	15.0	Cloudy, light snow, 1 day's sleighing.
" 13....	24.3	0.2	Fair, fine bright day.
" 14....	29.2	2.3	Fair.
" 15....	30.6	16.8	Cloudy, snow flurries.
" 16....	37.0	6.0	Cloudy, snow drifting, gale at night.
" 17....	1.0	3.0	Cloudy, snow, poor sleighing, 7 to 14 inches snow on ground.
" 18....	1.8	8.8	Cloudy, snow, snow drifting.
" 19....	6.1	19.5	Fair, sleighing good.
" 20....	15.2	31.9	Fair, very fine bright day.
" 21....	21.8	23.6	Fair, very fine day.
" 22....	13.0	16.3	Fair.
" 23....	11.2	15.5	Fair.
" 24....	9.2	7.1	Cloudy.
" 25....	17.0	28.7	Fair, very fine clear day, sleighing bad except on sheltered roads.
" 26....	29.6	0.8	Fair, fine mild day.
" 27....	36.0	16.2	Cloudy, squally wind.
" 28....	34.0	23.2	Cloudy, light snow.
" 29....	36.2	24.2	Cloudy, snow.
" 30....	35.2	25.0	Cloudy, 1 day's good sleighing.
" 31....	37.2	21.3	Fair, sleighing poor and going, except on sheltered roads, 0 to 14 inches snow on ground.

Maximum temperature for the 12 months, —

June 24, 1912. 85.7
January 11 and 19, 1913... 33.4

N. B. SANSON,
Observer.

No. 2b.

ANALYSIS OF NATIONALITIES OF VISITORS TO ROCKY MOUNTAINS PARK.

BATHIERS at the Upper Hot Springs from April 1, 1912, to March 31, 1913.

United States.. . . .	1,008	India.. . . .	3
England.. . . .	145	New Zealand.. . . .	11
Scotland.. . . .	27	Japan.. . . .	1
Australia.. . . .	17	France.. . . .	3
Ireland.. . . .	9	Austria.. . . .	1
Germany.. . . .	6	South Africa	2
China.. . . .	7	Canada.. . . .	20,578
Denmark.. . . .	2		
Switzerland.. . . .	3	Total for year.. . . .	21,823

VISITORS at the Cave and Basin from April 1, 1912.

Canada.. . . .	5,231	China.. . . .	18
England.. . . .	502	Japan.. . . .	21
Scotland.. . . .	293	France.. . . .	25
Ireland.. . . .	51	Austria	6
Australia.. . . .	54	Germany.. . . .	33
New Zealand.. . . .	43	Sweden.. . . .	41
New South Wales.. . . .	21	Switzerland.. . . .	27
South Africa.. . . .	18	Norway.. . . .	5
India.. . . .	15	Denmark	3
Ceylon.. . . .	7	Belgium.. . . .	4
Honolulu	8		
United States.. . . .	9,200	Total.. . . .	15,631
Argentina.. . . .	5		

N.B.—No record has been kept of visitors to the cave since September 18, 1912, owing to the work going on for new bath-house, blasting, pile-driving, etc., Up to date of March 31, 1913, would approximate a few hundred more.

From June 11, 1912, to March 31, 1913, the turnstile record of bathers showed.. . . .	16,047
From April 1, 1912, to June 11, 1913.. . . .	2,701
Total.. . . .	18,748

NUMBER of visitors registered at the Banff Springs hotel from May 15, 1912 to October 15, 1912.

United States.. . . .	8,441	Straits Settlements.. . . .	2
Canada.. . . .	6,261	France.. . . .	44
England.. . . .	695	Algeria.. . . .	4
Scotland.. . . .	146	Germany.. . . .	41
Ireland	45	Holland.. . . .	27
Australia	105	Belgium.. . . .	3
New Zealand.. . . .	79	Netherlands.. . . .	1
Tasmania.. . . .	2	Austria	6
India.. . . .	9	Hungary.. . . .	4
South Africa.. . . .	7	China	19
Fiji Islands.. . . .	3	Hawaiian Islands.. . . .	14
Samoa.. . . .	5	Cuba, Havana.. . . .	1
Jamaica.. . . .	1	Phillipine Islands	4
Bermuda.. . . .	1	Buenos Ayres.. . . .	1
Bahama Islands.. . . .	4	Mexico.. . . .	6

NUMBER of visitors registered at the Banff Springs hotel, &c.—*Continued.*

Switzerland.....	13	Java.....	1
Japan.....	10	Greece.....	1
Turkey.....	9	Batavia.....	2
Russia.....	3		
Norway.....	4		16,030
Sweden.....	2	Not registered.....	1,500
Denmark.....	1		
Spain.....	1	Total.....	17,530
Italy.....	2		

NUMBER of visitors registered at the Chateau (Sanitarium hotel) from April 1, 1912, to March 31, 1913.

Canada.....	6,013	South Wales.....	2
Alaska.....	1	India.....	6
United States.....	1,551	New South Wales.....	1
Hawaiian Islands.....	3	Germany.....	11
Peru.....	2	Holland.....	3
Rio Janeiro (Argentine Republic).....	2	Belgium.....	2
England.....	162	France.....	2
Scotland.....	36	Norway.....	2
Ireland.....	5	Japan.....	5
Australia.....	74	China.....	5
New Zealand.....	36		
Isle of Man.....	2	Total.....	7,926

NUMBER of visitors registered at the Alberta hotel, from April 1, 1912, to March 31, 1913.

Canada.....	6,935	Belgium.....	1
United States.....	672	Austria.....	2
England.....	49	Italy.....	6
Scotland.....	13	France.....	7
Ireland.....	2	Switzerland.....	2
Australia.....	9	Finland.....	1
New Zealand.....	3		
Bermuda, W. I.....	2	Total.....	7,724
Germany.....	20		

NUMBER of visitors registered at the Grand View Villa (Hot Springs) from May 11, 1912, to September 29, 1912.

Canada.....	3,230
Alaska.....	1
United States.....	1,088
England.....	11
Hawaiian Islands.....	2
Total.....	4,332

NUMBER of visitors registered at the Mount Royal hotel, Banff, from May 1, 1912, to September 30, 1912.

Canada.....	3,381	Australia.....	5
United States.....	1,089	South Africa.....	7
England.....	61	Hawaiian Islands.....	2
Scotland.....	15	France.....	1
Ireland.....	1	Denmark.....	1
Wales.....	3	Austria.....	1
New Zealand.....	7		
Tasmania.....	1	Total.....	4,575

NUMBER of visitors registered at the Upper Hot Springs hotel (Hydropathic hotel) from April 1, 1912, to March 31, 1913

Canada	2,506
United States	641
Ireland	1
Australia	1
New Zealand	1
Total	3,250

NUMBER of visitors registered at the King Edward hotel from April 1, 1912, to March 31, 1913.

Canada.. ..	4,628	China	3
United States.. ..	499	Italy.. ..	3
England.. ..	64	South Africa	2
Scotland.. ..	21	India.. ..	2
Germany.. ..	19		
New Zealand	14		5,284
Sweden.. ..	9	Not registered	1,750
Australia.. ..	8		
France.. ..	7	Total.. ..	7,034
Ireland.. ..	5		

NUMBER of visitors registered at the Homestead hotel (Temperance) from April 1, 1912, to March 31, 1913.

Canada	1,795
England	100
United States	100
New Zealand	5
Total	2,000

STATEMENT of persons registered at the Chalet, Lake Louise, Laggan, Alta.—Season, 1912.

Alberta.. ..	784	Alaska.. ..	2
British Columbia.. ..	283	Arizona.. ..	9
Manitoba.. ..	49	California	391
Saskatchewan.. ..	228	Colorado.. ..	11
Winnipeg.. ..	338	Idaho.. ..	20
Total	1,682	Los Angeles.. ..	299
		Montana.. ..	89
New Brunswick.. ..	16	Nevada.. ..	12
Newfoundland.. ..	3	New Mexico.. ..	9
Nova Scotia.. ..	37	Oregon.. ..	198
Ontario.. ..	977	San Francisco.. ..	405
Prince Edward Island.. ..	7	Dist. Columbia.. ..	418
Quebec	238	Total	1,863
Total.. ..	1,278		
Alabama.. ..	17	Arkansas.. ..	11
Florida.. ..	9	Kansas.. ..	45
Georgia.. ..	17	Kansas City.. ..	94
Kentucky.. ..	66	Missouri.. ..	47
Louisiana.. ..	27	Nebraska.. ..	40
Mississippi.. ..	12	Oklahoma.. ..	16
N. Carolina	7	Omaha	28
S. Carolina.. ..	15	Texas.. ..	337
Tennessee.. ..	46	Total	718
Total	216		
		Chicago.. ..	854
		Cincinnati.. ..	87

STATEMENT of persons registered at the Chalet, Lake Louise, Laggan, Alta.—Season, 1912—*Continued.*

Cleveland..	83	Africa	13
Detroit..	119	Australia..	75
Illinois..	372	Austria..	5
Indiana..	141	Belgium..	12
Indianapolis..	58	China.. . . . .	..
Iowa	276	Culebra, C. Z.. . . . .	..
Michigan..	151	Denmark.. . . . .	..
Ohio..	219	Cuba..	2
Pittsburg..	67	England..	532
St. Louis..	225	Egypt..	1
Total	2,652	France..	32
		Germany..	25
Milwaukee..	117	Hawaii..	50
Minnesota..	105	Holland..	11
Minneapolis..	230	India..	22
N. Dakota..	50	Ireland..	24
S. Dakota..	19	Japan..	2
St. Paul..	102	New Zealand	35
Wisconsin..	136	Norway..	2
Total	759	Phillipine Isles..	2
		Russia..	3
Connecticut..	66	South America.. . . . .	..
Delaware..	17	Switzerland..	11
Utah..	4	Spain..	1
Maine..	20	Siam.. . . . .	..
Maryland..	47	Sweden.. . . . .	..
Massachusetts..	393	Yukon.. . . . .	..
New Hampshire..	12	Total	939
New Jersey..	138		
New York State	1,138	Italy..	1
Pennsylvania	360	Fiji Islands..	2
Rhode Island	12	Bahamas..	1
Vermont..	5	Straits Settlements..	1
Virginia..	17	Netherlands..	1
W. Virginia..	9	Argentine Republic	1
Total..	2,238	Unlocated..	559
		Total..	12,511

SUMMARY.

Banff Springs hotel	17,530
Chateau (Sanitarium hotel)	7,926
Alberta hotel	7,724
King Edward hotel	7,034
Mount Royal hotel	4,575
Grand View villa	4,332
Hot Springs (Hydropathic)	3,250
Homestead (Temperance hotel)	2,000
Summer cottagers	3,500
Estimated excursionists, not registered.....	5,500
Lake Louise Chalet	12,511
Total	75,882
Season 1911-12	73,725
Increase	2,157



Sundance Canyon, near Banff.



Climbing in the Canadian Rockies,—A difficult piece of rock-work.

No. 2c.

THE ALPINE CLUB OF CANADA.

The Alpine Club House was open all the season, from the first week in June to the end of September. The tourists all hurry away at the end of August, few realizing that Banff is at its loveliest at the time of the turning of the leaves.

As usual, the Club acted as a bureau of general information to very many of the visitors to the mountains, even going so far as planning out tours for them. Owing to the constant changes in the hotel staffs, they have no real knowledge of the neighbourhood, and make strange assertions as to the names of the mountains, their height and geography generally.

A Club party made an expedition up the Ptarmigan valley and did some little climbing, but the weather was unfavourable for anything original. Another Club party journeyed to mount Assiniboine, but again the weather prevented mountaineering. Various ascents were made of Cascade, Rundle and mount Edith.

The members staying at the Club House were drawn from the following places:—

IN CANADA.

British Columbia.—Ferne, Kelowna, Sidney, Vancouver, Victoria.

Alberta.—Calgary, Edson, Edmonton, High River, Innisfail, Macleod, Ponoka.

Saskatchewan.—Prince Albert.

Manitoba.—Winnipeg.

Ontario.—Ottawa, Toronto, Woodstock.

Quebec.—Montreal.

IN THE UNITED STATES OF AMERICA.

North Carolina.—Ashboro.

Indiana.—LaFayette.

Massachusetts.—Boston.

New York.—Brooklyn, New York.

It may be of interest to add that on February 23, 1912, a member of the Club, Mr. Chas. E. Field, accompanied by Mr. F. Ravenscroft, made the ascent of mount Cascade by the southern, or crag face, most of the climb being made over the snow. It is believed that this is the first time this ascent has been made in winter.

The Alpine Club of Canada held its seventh annual summer camp in Vermilion pass on the surveyed route of the motor road being built from Banff to Windermere. As usual the Club managed to attract people of importance and distinction from many parts. The Dominion Government officers present were Mr. J. B. Harkin, Commissioner of Dominion Parks, and Mr. R. H. Campbell, Director of Forestry. The Government of British Columbia deputed Mr. W. W. Foster, the Deputy Minister of Public Works, to act as its representative. Mr. Wilcox, of Washington, D.C., the well-known author and explorer of the Canadian Rockies, was also present, and other well-known people. Prominent among these was Professor Coleman, R.R.S., the famous geologist and the president of the Club. The opinion was expressed by all those who visited the camp for the first time that only by actual presence was it possible to realize the invaluable work the Club was doing for the mountain regions of Canada.

A subsidiary camp was placed some little distance up Prospector's valley to which parties went daily from the main camp to visit the canyons of Tokumm creek and climb the mountains of the Ten Peaks rising above Moraine lake. Most of the surrounding mountains were climbed and the second ascent of mount Ball recorded.

Fifty-six passed the graduation test for full membership upon Storm mountain, mount Ball, mount Little, mount Fay and No. 3 of the Ten Peaks.

The following mountaineering clubs were represented: The Alpine Club, England; the Swiss Alpine club, the American Alpine Club, the Appalachian Mountain Club and the Mountaineers of Seattle.

One hundred and sixty-eight people were placed under canvas, nearly all of whom stayed for the existence of the camp. A synopsis of places represented, by provinces, states and countries, is given below:—

CANADA.

British Columbia.—Ferne, Kaslo, Kelowna, Revelstoke, Vancouver, Vernon and Victoria.

Alberta.—Banff, Calgary, Cowley, Edson, Edmonton, Lethbridge, Lundbreck, Macleod, Okotoks, Ponoka and Red Deer.

Saskatchewan.—Saskatoon.

Manitoba.—Winnipeg.

Ontario.—Braeside, Kingston, Ottawa, St. Mary's, Toronto and Woodstock.

Quebec.—Montreal.

GREAT BRITAIN.

England.—London, Nottingham, Wimbledon.

Scotland.—Aberdeen.

SWITZERLAND.

Interlaken.

UNITED STATES.

District of Columbia.—Washington.

Illinois.—Chicago, Galesburg.

Indiana.—LaFayette.

New York.—Brooklyn, New York.

New Jersey.—Summit.

North Carolina.—Ashboro.

Pennsylvania.—Bryn Mawr.

No. 2d.

STATISTICAL SUMMARY OF INFORMATION *RE* ROADS, TRAILS, SIDE-
WALKS, WATER AND SEWER SYSTEM, ROCKY MOUNTAINS PARK.

MILEAGE OF ROADS AND TRAILS.

	Miles.
<i>Roads.</i>	
Castle to Vermilion.....	9
Kananaskis to Banff.....	35
Banff to Hot Springs.....	3
Banff to Sundance canyon.....	4
Banff to lumber camp on Spray river.....	8
Tunnel Mountain drive.....	5
To lake Minnewanka.....	9
Banff to Laggan coach road.....	6.5
Laggan to lake Louise.....	3
Lake Louise to Moraine lake.....	9
Bankhead road to Buffalo paddock.....	1
Loop drive.....	7
Canmore station to mines.....	1.5
Town streets	6
Total	107
<i>Trails.</i>	
Spray to Mount Assiniboine.....	18
Banff to Spray lakes and Eau Clair wagon road.....	42
Bow Summit trail.....	30
Banff to Fatigue creek, <i>via</i> Sundance.....	19
Simpson-Pipestone trail.....	6
Cascade trail (Sawback to Bankhead).....	28
Mount Edith trail.....	11
To lake Minnewanka.....	14
Simpson to Simpson summit	14
Canmore to White Man's pass	4
Tunnel Mountain trail.....	1.5
Sulphur Mountain trail.....	3.5
Total.....	191

TELEPHONE SYSTEM AT BANFF.

The telephone system at Banff was installed in 1907. It comprised originally 27 miles of lines built at a total cost of \$5,582. Since that date a number of extensions have been made, bringing the number of lines now constructed up to 34.75 miles. This includes the following lines:—

To Bankhead.....	5 miles connecting 3 phones.
To lake Minnewanka	8 “ “ 3 “
To the Observatory, Sulphur mountain..	4 “ “ 1 “
To Upper Hot Springs.....	3 “ “ 1 “
To Hydropathic hotel	3 “ “ 1 “
To Grand View villa and Alpine club..	2 “ “ 2 “
To Cave and Basin.....	1 “ “ 2 “

Business phones, 52.

Private phones, 28.

The Banff system is also connected with the Alberta long distance system.

DEPARTMENT OF THE INTERIOR

WATER MAINS—BANFF (TOWN.)

Street.	Mains.	Hydrants.	Valves.
	Feet.	No.	No.
Banff avenue.....	4,800	11	11
Beaver.....	1,700	5	3
Muskrat.....	1,475	3	2
Otter.....	1,475	3	2
Bear.....	1,475	3	2
Buffalo.....	1,400	2	5
Cariboo.....	1,475	4	7
Lynx.....	1,300	5	4
Squirrel.....	650	2	2
Elk.....	325	1	
Marten.....	600	1	1
Wolf.....	1,850	6	8
Totals.....	18,525	46	47

WATER MAINS—BANFF (VILLA.)

Avenue.	Mains.	Hydrants.	Valves.
	Feet.	No.	No.
Cave.....	1,200	2	4
Spray.....	2,925	7	7
Totals.....	4,125	9	11

SEWERS—BANFF (TOWN.)

Street.	Mains.	Manholes.
	Feet.	No.
Banff avenue.....	1,400	5
Beaver.....	1,400	6
Muskrat.....	1,650	7
Otter.....	1,400	3
Bear.....	1,050	5
Buffalo.....	1,400	
Cariboo.....	1,575	3
Lynx.....	825	3
Squirrel.....	675	2
Marten.....	600	3
Wolf.....	1,755	
Totals.....	12,150	37

SEWERS—BANFF (VILLA.)

Avenue.	Mains.	Manholes.
	Feet.	Number.
River—From point opposite Sanitarium hotel to manhole where trunk sewer crossed Bow river.....	500	1
Trunk sewer (concrete) from Bow river opposite Muskrat street to outlet above falls.....	1,450	6
Total.....	1,950	7

GRAVEL WALKS—BANFF—(TOWN.)

Street.	From	To	Side.	Length.	Width.
				Feet.	Feet.
Muskrat.	Cariboo.	Buffalo.	East.	710	6
Elk.	Banff ave.	Marten.	East.	282	6
Otter.	Buffalo.	Moose	East and west . .	3,344	6
Muskrat	Buffalo.	Wolf.	West.	1,344	6
Beaver.	Buffalo.	Cariboo.	East and west . .	3,133	6
Buffalo.	Bear	Otter.	North	1,216	6
Bear.	Buffalo.	Cariboo.	East.	725	4.5
Bear.	Cariboo.	Wolf.	East and west . .	800	4.5
Lynx.	Cariboo.	C. P. R. station. .	East.	1,800	6
Squirrel	Lynx	Elk.	Southeast.	627	4.5
Banff avenue.	Cariboo.	Buffalo paddock. .	Northwest	1½ miles	6
Beaver.	Wolf	Moose.	East.	752 ft.	6
Total				4 miles 708 yards.	

GRAVEL WALKS—BANFF (VILLA.)

Avenue.	From	To	Side.	Length.	Width.
					Feet.
Cave	Bow Bridge.	Cave and Basin . .	East.	1 mile.	6
Spray	Bow Bridge.	C. P. R. hotel . .	East.	3,600 ft.	6
Total				1 mile 1,200 yards.	

STATEMENT OF PLANK WALKS.

Avenue or Street.	From	To	Side.	Length.	Width.
				Feet.	Feet.
Banff avenue.	Cariboo.	Wolf.	East.	600	6
Cariboo.	Banff ave.	Beaver.	South	260	4.5
Banff avenue.	Buffalo.	Bow bridge.	East and west . .	700	4.5
Total.				320 yards	

STATEMENT OF CEMENT WALKS.

Avenue or Street.	From	To	Side.	Length.	Width.
				Feet.	Feet.
Banff aveau.	Buffalo.	Wolf.	East and west . .	1,425	12
Total.				475 yards	



Road to Emerald Lake, Yoho Park.

YOHIO PARK

GENERAL DESCRIPTION.

Yoho Park comprises an area of about 560 square miles, situated on the western slope of the main chain of the Rocky mountains. The Kicking Horse river—which runs in a southwesterly direction—divides this area into almost equal parts. The tributaries of the Kicking Horse, Cataract creek, Ottertail and Beaverfoot rivers from the southeast, and the Yoho, Emerald, Amiskwi and Otterhead from the northwest—furnish the channels by which the visitor may reach the remoter places of interest. A trail leads from Hector, up Cataract creek to lakes O'Hara and Oesa, then over the ridge two miles further to lake McArthur. These lakes are surrounded by huge peaks, varying in height from eight to ten thousand feet, having their usual complement of glaciers and snowfields. Lake McArthur is also reached by trail up the Ottertail river, which flows to the northeast side of the Ottertail range. Along the southwest side of this same range flows the Beaverfoot river, from the southern boundary of the park.



Grade Reduction near Field, B. C.

Among the conspicuous peaks in this range are mounts Hanbury, Vaux, Chancellor and Goodsir, all giants over 10,000 feet. A carriage drive from Field to Ottertail and trails from there to the southern boundary of the park enables the visitor to reach these points of interest.

From the north, through the valley between the President and Rocky ranges, flows the Yoho river, fed by the great Habel, Waputik and Daly glaciers, which lie in valleys surrounding mounts Habel, Collie, Gordon, Balfour and Daley, peaks all over 10,000 feet. Near the head of this valley are found Twin falls, 500 feet, and Takakkaw falls, 1,150 feet in height, two of the most beautiful falls in the Dominion. Hundreds of travellers enjoy the trip to this valley by way of carriage road and trails each season.

To the west the President range forms a great basin, in which lies Emerald lake, a beautiful sheet of water almost surrounded by lofty peaks such as mounts Burgess, Carnarvon and Marpole, the President and the Vice-president. The Amiskwi and the Otterhead rivers flow through the valleys between the President and the Van Horne ranges and no wooded valleys in the mountains are more beautiful than these two and the basin of Emerald lake.

Carriage drives or trails diverge from Field to these places of beauty and grandeur, where giant snow-capped peaks, placid blue lakes and dashing torrents have been lavishly congregated by nature.

GLACIER PARK.

Glacier park is situated at the summit of the Selkirks and covers an area of 468 square miles. These mountains are ages older than the Rockies and their physical characteristics are markedly different. The rocks are composed of gray, pink, green and white quartzites and their colouring adds greatly to the beauty of the mountains.



On the Way to the Nakimu Cave, Glacier Park.

The annual precipitation, which is very heavy—there is a 36-foot snowfall at Glacier with an additional 13 inches rain—results in the formation of fields of snow and ice. These accumulations lie upon the caps of the mountains throughout the year and when seen from a distance give the whole district the appearance of a frozen sea stretching away farther than the eye can reach. From these are formed innumerable glaciers of great beauty and variety.

The valleys are deep and narrow, clothed with dense forests of Giant cedar—often 10 feet in diameter—cottonwood, spruce, hemlock, Douglas fir and the beautiful Lyall's larch. The flowers and shrubs also grow in great profusion, over 500 varieties having been discovered by Professor Macoun.

From the summit of Rogers pass—altitude, 4,309 feet—Bear Creek valley slopes to the east and the Illecillewaet to the west, and it is through these valleys that the railway passes over the range. Unlike Yoho Park, Glacier Park has few lakes or

waterfalls of importance, but has instead a sea of mountain peaks and glaciers, with the great valley of the Illecillewaet stretching to the western boundary. Of the great glaciers, the Illecillewaet and the Asulkan are very easy of access, the former being less than two miles from the depot and the latter seven miles distant. Trails lead to both.

The largest mountain peaks close at hand are: Sir Donald, Avalanche, Tupper and Macdonald to the east, Hermit, Rogers, Grant and Swiss peaks to the north, and Cheops, Cougar, Bonney and Ross peaks to the west.

The trail from Glacier to Roger's pass and thence over Baloo pass, leads to the famous Nakimu Caves, which were discovered some six years ago. The view from Baloo pass cannot be equalled on the continent on account of the diversity of scenery presented. The Caves themselves are a wonder, on account of the diversity of size and shape of the underground chambers, while the roar of the cataracts rushing through some, the strong air currents in others, and the florescent calcium ornamentalions on the walls and roof in many, produce an impression of weird grandeur. Lookout point, Goat falls and the Upper Cougar valley are the chief points of interest in the vicinity of the Caves.

With the completion of the carriage drive from Glacier to the Caves, hundreds who cannot endure the fatigue of the pony ride, will be able to reach this point in carriages. Good trout fishing may be had in the Illecillewaet river at certain seasons of the year.



The "Switch-back" in Yoho Drive, $6\frac{1}{2}$ miles from Field, Yoho Park.

Photo G. R. Clark.

No. 3.

REPORT OF THE SUPERINTENDENT OF YOHO AND GLACIER PARKS.

FIELD B.C., April 1, 1913.

The Chief Superintendent of Dominion Parks,
Edmonton, Alberta.

SIR,—I have the honour to submit herewith my first annual report as Superintendent of Yoho and Glacier Parks, for the fiscal year ending March 31, 1913.

As I did not receive my appointment until after the middle of May, the work of cleaning up the usual collection of debris on the streets of Field, and making light repairs to the Emerald lake and Natural Bridge drives, was not begun until about the 20th. On these roads the fallen timber was cut out and the ruts were patched up with gravel. After this was completed we went over the Yoho road as far as the switch-back, raking off loose rocks, cutting out fallen timber and repairing and gravelling. On account of snowslides having crossed the road beyond this, we moved camp to the Ottertail drive, to make similar repairs there. This drive which is built on the Canadian Pacific Railway grade and extends west of Field a distance of eight miles, was much used this season, as many began to realize that some of the finest views in the mountains may be obtained from it. Most conspicuous are the high peaks of the Ottertail range on the left and the Van Horne range on the right. In the Ottertail, mounts Vaux, Hanbury and Goodsir tower over 10,000 feet, while those of the Van Horne rise to altitudes of over 9,500 feet. From this drive can be seen the prettiest green wooded valleys in the mountains, viz., the Otterhead and the Amiskwi valleys, situated between the Van Horne and the President ranges.

The view also includes—looking north—all the peaks visible from Emerald lake, excepting mount Wapta, this being hidden by mount Burgess in the foreground. This drive has the further distinction of having probably the highest and longest wooden bridge in the world, which is used solely for carriage traffic, it being 120 feet from the water to the roadway, and 700 feet long.

From the east end of this bridge a pony trail leads to beautiful lake McArthur, which is about 14 miles distant.

On this trail the necessary timber was cleared out, and otherwise repaired for a distance of six miles, until the snow rendered it necessary to stop work.

The trail from Ottertail to Leancoil along the south side of the Kickinghorse river was also cleared and repaired.

Owing to the timber in some of the large fills on the Ottertail drive falling in, it was necessary to bridge one gap, and to fill in others. The coarse rocks were raked off the entire distance, small washouts filled up and some side ditching done. While working here, the men were called to Leancoil to fight a forest fire in the Beaverfoot valley.

This fire had assumed large proportions by the time the men got to it, they having to walk 14 miles to the scene. Fortunately this was extinguished, but it meant hard work for almost two weeks. A very small amount of marketable timber was destroyed as the fire was kept confined to the old slashings.

Work was then started on the Yoho drive, and repairing and gravelling done between mileage 4 and 6. Then the arrival of the tourist season called for the opening of the drive through to the Takakkaw falls and the upper Yoho. Large quantities of rocks and earth had come down on the road through the canyons, so we moved camp close to the work. Considerable portions of the road through those canyons had also fallen away, which made it necessary to undertake the widening of these rock cuts, the road being only about 8 feet wide all through, in order to put the road on solid foundation. Solid rock had to be removed from 6 to 11 feet in width, and from 5 to 12 feet

in depth throughout the distance. The blasting destroyed the existing railings, which were replaced by new and much heavier ones. About four miles of gravelling was done on this road altogether and one mile of widening between mileage 3 and mileage 5. The bridge at mile $3\frac{1}{2}$ was taken out by a freshet during July and a new one 28 feet long had to be put in its place. About one-half mile of clearing and burning of old trees and logs for 30 feet each side of the roadway was completed between mile 2 and 3; also a short distance on the Hector drive where it branches from the Yoho drive.

The traffic on this drive was very heavy this season, which goes to prove how fine is the scenery of the Yoho valley. With your approval, it is my intention the coming season to construct a foot-bridge across the Yoho stream, and a trail to Takakkaw falls; also a new location of the trail to Twin falls should be looked into, as this trail is in a very poor location at present and very hard to keep in repair.

It is also desired to widen this road from Field east for the first three miles, making it standard width.

On the Emerald Lake drive, widening was undertaken by the Glacier crew, and about one and a half miles were gone over although much of it has to be regravelled. There remain about two miles yet to be widened, and the greater part of the Emerald Lake and the Natural Bridge roads needs to be regravelled. The old trees and brush alongside the road for a distance of three and a half miles were cleared and burnt which adds much to the appearance of the road. We hope to be able to complete this clearing, the remainder of the distance, next season.

On the occasion of the visit of Their Royal Highnesses the Duke and Duchess of Connaught, and Princess Patricia to Field, this was the route taken and we understand they were much pleased with the trip.

During the year a small crew was kept repairing the trails in different parts of this Park; about forty-eight miles altogether having received attention. The following have been given necessary repairs: Field to Twin falls over Burgess pass, Field to the Fossil beds, Hector to Stephen, Hector to lake O'Hara, Hector to Sherbrooke lake, Ottertail to Leancoil, Ottertail drive towards lake McArthur, six miles. The only trail not receiving any attention was that up the Amiskwi valley.

GLACIER PARK.

Work in this park was not started until about the last of the month of June, when we began clearing the vast amount of trees, rocks and earth—which had been carried down by the snowslides—from the part of the road constructed during the previous summer. This done, new construction was begun on the extension of the road to the Cougar valley. This construction is both slow and expensive, on account of the steep mountain side where horses cannot be used to do the grading. Large trees and stumps have to be removed, besides much drilling and blasting of the rock. When another half mile has been finished there will not be either as steep a slope nor any timber to be removed, so that cost of construction should be less and more progress made. Every effort should be made to have this drive completed to the Caves, as it will not be possible to get material to the Caves for improvements there, except at great cost, until this road is completed.

During the short time the crew was working here about one mile of new road was built.

The services of Mr. C. H. Deutschman, the discoverer of these Caves were again secured for the season at the Caves in the capacity of caretaker. He has shown both care and courtesy, all visitors praising his efficiency both as guide and host.

With the assistance of one man for ten days, he installed some 250 feet of iron railings inside the Caves, to replace the wooden railings. These pipes were given a good coat of enamel, which was dried thoroughly before being put in position. This was quite an undertaking, considering the conditions under which these men had to work.



Great Glacier from Glacier Station.

Nothing was undertaken with improvements at the larger Cave because the water remained high until too late in the season. We are pleased to report having received a large Union Jack, to be floated from the fine flagpole erected by the caretaker, at the Caves.

Two heating stoves were purchased and placed in the Government cabin at the Caves, and parties staying over night appreciate very much the increased comfort.

The caretaker's register shows a very substantial increase in the number of visitors, and we believe that as soon as the road reaches the Caves, the necessity will arise for much increased accommodation at this point.

Many pleasure-seekers made the trip from Glacier House to Rogers' pass, up Bear creek trail over Baloo pass, to the Caves. There is such a diversity of scenery on this trip, that all thought of fatigue is forgotten, especially when the panorama from the summit of Baloo pass is beheld. On both the east and west slopes on this trail we did considerable ditching, brushing and removing of rocks, to make the travelling better.

This work was done early in July, but later in the season several washouts occurred and had to be repaired again at these places. Our opinion is that there can be found a much better location for part of this trail between Glacier and Rogers' pass, where repairs to snowsheds will not interfere with the trail. On the trail to the Great Glacier, considerable repair work will be required in order to make it possible for pedestrians to reach the glacier dryshod. As it is now, the streams from the different glaciers keep changing their courses somewhat, oft-times running down the trail.

It has been suggested by some well-known tourists that some trail work be undertaken in the future. Some of the proposed routes I will be pleased to look over with you during the coming season.

The question of adequate fire patrol in both these parks must always be taken into consideration, for once our green timber is destroyed, parks will lose much of their attractiveness. I am pleased to report that the service rendered by the fire-wardens in the Yoho Park is in every way satisfactory. Despite all notices, it appears many people carelessly throw burning matches or cigar ends into the bush and start fires, without thinking what may be the result of their carelessness. We had three instances of fires started in this way during the past season.

I am also pleased to report excellent results from the several foremen in charge of the work.

I have the honour to be, Sir,
Your obedient servant,

F. E. MAUNDER,
Superintendent.

STATEMENT of persons registered at the Mount Stephen House, Field Station, B.C.—
Season, 1912.

Alberta.. .. .	1,562	Indiana.. .. .	87
British Columbia.. .. .	1,959	Indianapolis.. .. .	2
Manitoba.. .. .	16	Iowa.. .. .	118
Saskatchewan.. .. .	127	Michigan.. .. .	108
Winnipeg.. .. .	314	Ohio.. .. .	138
	3,978	Pittsburg.. .. .	19
		St. Louis.. .. .	58
			1,121
New Brunswick.. .. .	17	Milwaukee.. .. .	11
Newfoundland.. .. .	0	Minnesota.. .. .	125
Nova Scotia.. .. .	16	Minneapolis.. .. .	27
Ontario.. .. .	326	N. Dakota.. .. .	25
Quebec.. .. .	151	S. Dakota.. .. .	5
	550	St. Paul.. .. .	16
		Wisconsin.. .. .	119
Alabama.. .. .	15		328
Florida.. .. .	2	Connecticut.. .. .	48
Georgia.. .. .	2	Delaware.. .. .	3
Kentucky.. .. .	15	Dis. Columbia.. .. .	63
Louisiana.. .. .	2	Maine.. .. .	6
Louisville.. .. .	1	Maryland.. .. .	17
Mississippi.. .. .	4	Massachusetts.. .. .	179
N. Carolina.. .. .	2	New Hampshire.. .. .	8
S. Carolina.. .. .	2	New Jersey.. .. .	48
Tennessee.. .. .	11	New York.. .. .	379
	56	Pennsylvania.. .. .	220
		Rhode Island.. .. .	18
Alaska.. .. .	3	Vermont.. .. .	13
Arizona.. .. .	6	Virginia.. .. .	8
California.. .. .	180	W. Virginia.. .. .	5
Colorado.. .. .	11		1,015
Idaho.. .. .	6	Africa.. .. .	2
Los Angeles.. .. .	92	Australia.. .. .	41
Montana.. .. .	6	Austria.. .. .	3
Nevada.. .. .	0	Belgium.. .. .	3
New Mexico.. .. .	1	China.. .. .	9
Oregon.. .. .	46	England.. .. .	258
San Francisco.. .. .	102	Cuba.. .. .	3
Washington.. .. .	75	France.. .. .	6
	528	Germany.. .. .	12
		Hawaii.. .. .	11
Arkansas.. .. .	4	Holland.. .. .	5
Kansas.. .. .	15	India.. .. .	9
Kansas City.. .. .	2	Ireland.. .. .	10
Missouri.. .. .	105	Japan.. .. .	2
Nebraska.. .. .	24	New Zealand.. .. .	37
Oklahoma.. .. .	4	Norway.. .. .	2
Oregon.. .. .	0	Scotland.. .. .	44
Texas.. .. .	17		457
	171		
Chicago.. .. .	199	Unlocated.. .. .	239
Cincinnati.. .. .	20	Total.. .. .	8,413
Cleveland.. .. .	43		
Detroit.. .. .	12		
Illinois.. .. .	317		



Getting ready for the trail at Glacier, B. C.

STATEMENT of persons registered at the Emerald lake Chalet, near Field, B.C.—
Season, 1912.

Alberta.. . . .	77	Iowa.. . . .	30
Brit. Columbia.. . . .	60	Michigan.. . . .	2
Manitoba.. . . .	2	Ohio.. . . .	37
Saskatchewan.. . . .	13	St. Louis.. . . .	25
Winnipeg.. . . .	31		184
	183		
New Brunswick.. . . .	3	Milwaukee.. . . .	14
Newfoundland.. . . .	0	Minnesota.. . . .	8
Nova Scotia.. . . .	0	Minneapolis.. . . .	40
Ontario.. . . .	67	N. Dakota.. . . .	5
Quebec.. . . .	37	S. Dakota.. . . .	0
	107	St. Paul.. . . .	16
		Wisconsin.. . . .	11
			94
Alabama.. . . .	2		
Georgia.. . . .	1	Connecticut.. . . .	14
Kentucky.. . . .	2	Delaware.. . . .	0
Louisiana.. . . .	2	Maryland.. . . .	10
Tennessee.. . . .	9	Massachusetts.. . . .	63
	16	New Hampshire.. . . .	7
		New Jersey.. . . .	19
Alaska.. . . .	2	New York.. . . .	137
California.. . . .	44	Pennsylvania.. . . .	50
Colorado.. . . .	0	Rhode Island.. . . .	0
Idaho.. . . .	5	Vermont.. . . .	1
Los Angeles.. . . .	24	Virginia.. . . .	0
Montana.. . . .	1	W. Virginia.. . . .	6
Oregon.. . . .	11		307
San Francisco.. . . .	42		
Dist. Columbia.. . . .	34	Africa.. . . .	0
New Mexico.. . . .	2	Australia.. . . .	6
	165	Austria.. . . .	1
		Belgium.. . . .	1
Arkansas.. . . .	2	China.. . . .	6
Kansas.. . . .	9	England.. . . .	70
Kansas City.. . . .	3	Scotland.. . . .	8
Missouri.. . . .	1	Ireland.. . . .	2
Nebraska.. . . .	0	France.. . . .	2
Texas.. . . .	3	Germany.. . . .	0
	18	Hawaii.. . . .	3
		New Zealand.. . . .	2
Chicago.. . . .	48	Norway.. . . .	2
Cincinnati.. . . .	0	Switzerland.. . . .	2
Cleveland.. . . .	1		105
Detroit.. . . .	6		
Illinois.. . . .	28	Unlocated.. . . .	13
Indiana.. . . .	2	Total.. . . .	1,192
Indianapolis.. . . .	5		

STATEMENT of persons registered at Glacier House, Glacier, B.C.—Season, 1912.

Alberta..	126	Iowa..	65
British Columbia..	265	Michigan..	73
Manitoba..	11	Ohio..	107
Saskatchewan..	63	Pittsburg..	19
Winnipeg..	112	St. Louis..	113
	577		1,055
New Brunswick..	6	Milwaukee..	51
Nova Scotia..	5	Minnesota..	43
Ontario..	10	Minneapolis..	100
Prince Edward Island..	5	S. Dakota..	14
Quebec..	72	N. Dakota..	24
	390	St. Paul..	58
		Wisconsin..	69
Alabama..	7		339
Florida..	2	Connecticut..	51
Georgia..	8	Delaware..	7
Kentucky..	37	Dis. Columbia..	151
Louisiana..	14	Maine..	14
N. Carolina..	1	Maryland..	18
S. Carolina..	9	Massachusetts..	219
Mississippi..	4	New Hampshire..	14
Tennessee..	27	New Jersey..	66
	100	New York State..	753
		Pennsylvania..	254
Arizona..	4	Rhode Island..	16
California..	207	Vermont..	5
Colorado..	3	Virginia..	9
Idaho..	12	W. Virginia..	1
Los Angeles..	186		1,560
Montana..	5	Alaska..	2
Nevada..	6	Africa..	12
New Mexico..	4	Australia..	38
Oregon..	55	Austria..	6
San Francisco..	155	Belgium..	1
	577	China..	15
Arkansas..	8	England..	260
Kansas..	17	France..	24
Kansas City..	46	Germany..	14
Missouri..	24	Hawaii..	20
Nebraska..	26	Holland..	5
Oklahoma..	1	India..	12
Omaha..	2	Ireland..	14
Texas..	9	Japan..	6
	133	New Zealand..	23
Chicago..	280	Norway..	1
Cincinnati..	34	New S. Wales..	4
Cleveland..	66	Phillipine Isles..	5
Detroit..	48	Scotland..	33
Illinois..	165	Switzerland..	5
Indiana..	54		490
Indianapolis..	41	Unlocated..	172
		Total..	5,419



In Buffalo Park, Wainwright, Alta.

BUFFALO PARK.

DESCRIPTION.

Buffalo Park, the home of the Government herd of buffalo, the largest herd in the world, is situated one-half mile south of Wainwright and follows the Battle river south and east for a distance of eighteen miles, constituting an area of 160 square miles. The park is entirely surrounded by a high wire fence and is fire-guarded on both sides by a ploughed strip of land 20 feet wide. Up to the present this has served as a very safe protection from prairie fires which at certain seasons of the year are very prevalent through this and other districts of prairie nature.

The general appearance of the entire enclosure is of a hilly and rolling country dotted with numerous small lakes and bluffs, providing an ideal home for all wild life.

The land is of a sandy nature south and west, but of a more loamy nature north and east, and would be fit for no other purpose than the one it is now used for, viz., a game preserve.

The scenic part of Buffalo Park, which at present is practically unknown to the travelling public, is very beautiful. In this connection the Superintendent of the Park says:—

‘I have travelled extensively through the provinces of Manitoba, Saskatchewan, Alberta and British Columbia, and can say with a clear conscience that nature as provided in Buffalo Park is worth any tourist’s time to see. From the numerous high hills one can gaze upon the long valleys, which are furnished with large lakes dotted with islands thickly wooded, winding their way along the many hill sides, and the immense expansion of rolling country dotted with bluffs which can be seen from almost any high hill is certainly beautiful. I have spent many a half hour on the top of such hills admiring the beauties of nature to my heart’s content, while making the many rides through the park.

‘Many noted tourists, on being taken through the park, expressed their astonishment and pleasure on viewing such a beautiful expanse of country with so many distinct scenic features. It is safe to say that when better roads are secured through the park it will become one of the many great tourist centres.’

No. 4.

REPORT OF THE SUPERINTENDENT OF BUFFALO PARK.

WAINWRIGHT, ALTA., March 31, 1913.

The Chief Superintendent of Dominion Parks,
Edmonton, Alta.

SIR,—I have the honour to submit herewith my first annual report as Superintendent of Buffalo Park for the fiscal year ending March 31, 1913.

As my appointment did not go into effect until the month of June, 1912, I feel that all the credit for the successful operation of the work is not altogether due to me, as a great part of the plans and arrangements for the expenditure of the appropriation were made previous to the time that I commenced duties here.

During the early spring, under the supervision of Mr. E. Ellis, the former superintendent, the grounds around the superintendent’s quarters were broken up and sown to grass, and numerous small trees and shrubs planted in various groves in a most artistic manner. I am pleased to report that all the shrubs and trees have done very well, but the lawn was somewhat of a failure, owing to the fact that the ground was not properly cultivated to allow the cutting of the grass. The sod was not broken up and rolled as it should have been which will necessitate having this work done over this year.



Moose in Buffalo Park.

Photob y J. H. Gano



Moose in Buffalo Park, Wainwright, Alta.

Photo by J. H. Gano.

The different wells at the superintendent's quarters also proved a failure having all gone dry and the water for both domestic and stable purposes had to be hauled from the first gate quarters in barrels. Just as soon as the frost is sufficiently out of the ground I intend, with your permission, to bore a well adjacent to the superintendent's house deep enough to furnish an ample supply of water at all times.

This was our first year to undertake farming, and the experiment proved quite a success. When the frost was sufficiently out of the ground, breaking of the land was started. Eighty-seven acres were turned over at winter quarters and thirty-two acres in the home park at the Wainwright end. Forty-five acres were cultivated and sown to oats at winter quarters and thirty-two acres cultivated and sown to oats at the Wainwright end. Owing to the fact that this land had to undergo all the operations of preparing the seed, our crop was somewhat late, but the very favourable season soon brought it to a good condition, but not sufficiently advanced to ripen. In order to save the crop from the frost we were obliged to cut it for green feed and it is being used to great advantage for this purpose.

When it is realized that all our horses were young and broken to harness only in the spring, will readily be seen that the work accomplished was of no small nature.

FIREGUARDS.

During the latter part of June and the whole month of July the one hundred and seventy-seven miles of fireguard around and across the park were all thoroughly ploughed. Owing to the very wet season the weeds grew up again very rapidly and before autumn we were again obliged to plough over a large portion of the guards to ensure safety. Fortunately, however, they were not needed, as we did not have a prairie fire in the neighbourhood of the park last autumn.

I also wish to draw your attention to the nature of the posts in our main fence. It appears that all the posts along the north and west side, as well as a portion of the east side, were put in the ground with the bark on and a very great number of them have already decayed in the ground. I had six men follow the fireguard and camp all around the park dropping posts, and many times it was found necessary to take the men off the ploughs to help with the fence work. From different inspections that I have made of the fence last fall and this spring I expect we will have to double our fence gang this year.

HAYING.

We were very unfortunate in our haymaking during the past season; owing to so much rain and the boggy nature of our meadow, it was almost impossible to make hay at all. During the month of August we had eighteen days' rain which flooded the meadow and filled the outlet to the creek and the ditches level with the land which made it impossible to get into the meadow proper at all. We were therefore obliged to cut all upland hay and what pot holes that were possible to get into, in order to secure hay at all. Two hundred and eighty tons of hay were put up in this way; this, along with the seven hundred tons left over from last year, gave us an ample supply for this winter's feed.

Next year, with your approval, I hope to find some solution of draining the meadow in case of another wet season. All the bridges that were built over the creek in 1910 and 1911 were washed away, and next season it will be necessary to construct new bridges.

This spring it is my intention, subject to your approval, to erect a cottage for the men at winter quarters; also a new stable for the horses as the present accommodation is entirely inadequate.

TELEPHONE LINE.

The telephone line installed during the year 1910 from the superintendent's residence to winter quarters and thence to Hardisty gate, has given very poor satisfaction this year. The telephones are of an old type and the wire used is altogether too light

to stand the weather. It is very necessary that our 'phones should be in perfect working order at all times and I hope next year to be able to instal a proper system which can be depended upon.

HORSES.

During the early spring and summer our horses were attacked by an epidemic of influenza and distemper which greatly crippled us in our work. We were unfortunate in losing two fine horses from this disease and two more work horses were put out of commission for the season's work. I am, however, pleased to report at the time of writing that all our horses are in a most healthy condition. With the addition of a few more work teams next spring our work will be accomplished much easier. Two of our work mares and one saddle mare had foals in the spring which, from all appearances, will turn out to be valuable stock. Owing to our cramped stable room last winter we were obliged to let the two work mares with the three colts and the two-year old colt winter out. They have come through the winter all right, but they are on the thin side. We have taken them in and are endeavouring to put them in shape for the season's work.



Feeding the Buffalo in winter, Buffalo Park.

BUFFALO.

I note from the last fiscal report that we had close in the neighbourhood of one thousand buffalo in the Park. With this year's increase of 208 and a loss of 21, I am pleased to report 1,188 head of living buffalo now in the park. This is the first actual count that has been secured of the buffalo for some years, and it is at least gratifying to know exactly the right number living. We met with excellent success in the round-up last fall. During the month of October we threw open the gates at winter quarters and over seven hundred head drifted in of their own accord, the balance we quietly and gradually worked in without the aid of any extra help. During the early winter we made several attempts to get a count on the bunch, but they became so vicious that we were obliged to give up for a time. I hope next year to be able to place a couple of riders in the big park to work among the animals continually and endeavour to get them used to horses and rounding up.

At the home park, at the Wainwright end, we were obliged to cut out about seventy-five head into the big park on account of the pasture becoming very thin. We managed to hold all the animals turned out close to the south fence of the home park where they were fed all winter and seemed quite contented with the change.

Owing to the very mild winter we did not do any feeding at winter quarters until after the first week in February. Previous to that time the animals preferred to pick on the prairie.

At the home park we were obliged to start feeding earlier on account of the pasture. I am pleased to report that all the animals came through the winter in splendid shape.



Photo by F. W. Bell.

Elk in Buffalo Park, Wainwright, Alta.

The moose are doing very well, except one female that became very thin in the early winter and had to receive special attention in feeding. However, I am pleased to say that she pulled through the winter all right and will soon be able to rustle for herself. There has been an increase of only one moose this year, but I am looking for a larger increase next year.

The elk have done exceptionally well, with a natural increase of seven and a loss of one doe, which makes the herd at the present time twenty-four, all in a healthy, thriving condition.

The wild deer seem to be increasing although we have never been able to get a count of them. The riders report having seen several large fawns. I would estimate that there are at least sixty head now in the park.

ANTELOPE.

I am sorry to have to report very poor success in raising the antelope, there being no increase and, with a loss of six, there is a total of four left, all males. There seems to be something lacking in our pasture which is necessary for their sustenance, and this matter will have to be studied in order to make a success of raising these little animals.

The animals now in the park are:—

Buffalo, 1,188; increase, 208; decrease, 21; (received from Pablo, 7). Elk, 25; increase, 7; decrease, 1. Moose, 10; increase, 1; decrease, 2. Antelope, 4; increase, 0; decrease, 6. Deer (estimated), 60; increase, 10 (estimated).



Antelope in Buffalo Park.



Deer in Buffalo Park.

Photo by F. W. Bell.

I presume that you are no doubt aware that the moose and elk become very vicious at certain seasons of the year, and I would therefore suggest very strongly that they be fenced off by themselves adjacent to the home park where visitors will be able to see them without endangering their lives.

VISITORS.

The visitors this year total 2,796, according to the diary kept by the gate-keeper, which makes a substantial increase over last year and all previous years.

From a check of the hotel registers I find that twenty-one of the visitors are from various parts in England, six from Ireland and the balance all Canadian tourists. When the Grand Trunk Pacific Railway Company complete their transcontinental line, I expect there will be a great number of visitors from foreign lands.

A great number of the visitors that passed through the gates this year expressed their delight and surprise at seeing so many wild animals in their natural surroundings.

The feathered game are becoming very plentiful in the park and, especially during the open season, the park is infested with small game which appear to realize that they are fully protected and the country surrounding the park has already proved a mecca for sportsmen.

I am pleased to be able to report that there have been no infractions of the park regulations during the past year.

In conclusion, I wish to express my appreciation of the valuable support received from yourself and other officials in connection with the park in enabling me to carry out my work.

I have the honour to be, sir,
Your obedient servant,

W. E. D. McTAGGART,
Superintendent Buffalo Park.

ELK ISLAND PARK.

Elk Island Park is a small reservation for the preservation of wild animals, about three miles from Lamont, Alberta, one of the stations on the main line of the Canadian Northern railway. The park has an area of about sixteen square miles and is entirely surrounded by a woven wire fence, nine feet high. It was originally established for the protection of elk, but contains at present a number of other animals as well, including: 71 buffalo, 19 moose and about 60 mule deer.

The tract is mostly wooded, the north end being very heavy, but the south end, which is fenced off for pasture for the buffalo and some moose, is more rolling and not so bushy; it can be driven all over by a team and vehicle, but the north end in places is almost inaccessible on horseback and this is where the wild deer and moose stay.

The brush is principally poplar, willow and balm of gilead, with a small amount of spruce.

Island lake is situated about the centre to the west side and contains, by survey, one thousand and forty acres. It is quite deep, being in the centre about forty feet.

In it are fourteen islands, ten of which are wooded. A considerable sprinkling of spruce is on the wooded ones and gives them an added beauty.

A comfortable cottage is on the west side, nine and one-half miles from Lamont, for the use of the superintendent, also a neat little stable.

The bush is fairly alive with partridge and prairie chicken and all manner of water fowl inhabit the lake in summer; water animals, such as musk-rats and mink are very plentiful, and there are fish in the lake, but not in great numbers.



In Elk Island Park.



In Elk Island Park.

No. 5.

REPORT OF THE SUPERINTENDENT OF ELK ISLAND PARK.

ELK ISLAND PARK, March 31, 1913.

P. C. BARNARD-HERVEY,
Chief Superintendent Dominion Parks,
Edmonton, Alta.

SIR,—I have the honour to submit herewith my third annual report.

The year has not been very favourable owing to heavy rains during the three summer months, which left the roads in very bad condition until late in the fall; rain also caused considerable trouble in haymaking, as the old hay sloughs were flooded and new ones had to be used, with the result that there is a good deal of old bottom in the hay.

In spite of the rain there was a decided increase in the number of visitors, in all 1,464. Quite a number of automobile parties came from Edmonton this year, some of whom found the park quite by accident; all expressed themselves delighted with the place and it is expected that an increased number of visitors will result from the publicity the Edmonton visitors will give the place; a number of campers are also expected.

I would suggest that roads inside the park be built before the rainy season begins. A good time for such work is in the spring, as soon as the frost is out of the ground.

I would suggest that some of the best islands be cleaned and made comfortable and attractive for visitors; the islands are all nicely wooded; but a good deal of under brush and nettles make it disagreeable.

The lake is a great drawing card for people living nearby for picnic and Sunday resort; also for people from the towns close by. Last summer a person from Lamont put a private launch on the lake which also proved a great drawing card.

THE ANIMALS.

The animals are in good condition and increasing steadily, there being an increase of twelve buffalo calves and one young moose; the moose are mostly young animals, hence the small increase, but a good increase is expected in another year. As near as can be estimated there has been a fair increase in elk and deer in the large park, where they are wild. We had a loss this winter of one aged buffalo bull and one moose. I would suggest that when the old bulls are beaten out of the herd that they be shot when their coats are prime, otherwise they wander off by themselves and sometimes die and the fur is destroyed by coyotes before they are found, or else they die in the spring when their coats are no good.

I received instructions from your office to ship a pair of moose to Washington, D.C., but a male of the proper age could not be secured; a female was shipped accordingly.

Following is a list of the animals in the park at the present time:—

Buffalo.. . . .	71
Moose.. . . .	19
Elk (estimated).. . . .	40
Deer (estimated).. . . .	60

Thanking you for your support in carrying on my work.

I am, your obedient servant,

ARCH. COXFORD.
Superintendent of Elk Island Park.



Photo. A. J. A.



Moose in Elk Island Park.

WATERTON LAKE PARK.

GENERAL DESCRIPTIONS.

Waterton Lake Park is the smallest of the Canadian scenic reservations, comprising an area of 16 square miles. It is situated in southern Alberta and originally extended to the international boundary, but was reduced by the Forest Reserves and Parks Act of 1911 to a little less than one-third its former area. The chief feature is the chain of lakes which give their name to the park. These lakes are enlargements of the Waterton river, which flows north to join the Belly river. The upper lake extends for three miles into the United States. Its Canadian portion is broken by a rocky promontory from Sheep mountain, the most magnificent peak in the Wilson range, into two parts, seven and two and one-half miles long respectively. The lower and larger lake, of which only a small portion is now in the park, is entirely surrounded by bare, rugged mountains over 8,000 feet in height. From the north and west there flow into the lake three picturesque streams, Blakiston brook, Oil creek and Reservoir creek which 'tumble down through deeply-carved valleys to plunge in cascades over the harder strata or remain dammed up in cold blue, rock-walled lake'. The mountains show the picturesque formation characteristic of the Wilson range. On their western side they rise in steep, often precipitous cliffs from the foot-hills, with long gentle slopes to the west to correspond with the tilt of the strata. In many places the soft limestone and shale has been worn into strangely-shaped columns, spires and pinnacles and the alternate green of the sandstone and bright red of the shales makes a brilliant picture on a sunny day.

Although no true glaciers are found in this district many of the peaks bear great patches of perennial snow and ice which lend an Alpine charm to the landscape. The slopes of the older valleys are covered with pine, spruce, balsam and Douglas fir.

The main pass over the Divide is the South Kootenay or Boundary pass. This was the ancient pathway of the Indians on their annual hunting expeditions over the mountains and was used by them until about forty years ago. The summit of the pass has an elevation of 7,100 feet.

Game of various kinds abounds. Black and white tailed deer, the Rocky Mountain or Bighorn sheep and black and grizzly bear are comparatively plentiful. The fishing is exceptionally good and forms one of the chief attractions for visitors. Several varieties of trout are found in the lakes and streams, some of which, namaycush, are very large, specimens of as high as 30 pounds having been taken in recent years. Pike and grayling are numerous.

The view from Black Bear mountain, one of the main peaks of the park, is said to be of unparalleled magnificence. One of the Forestry officers thus describes it:—

'On the east are seen Sofa and Sheep mountains of the Wilson range, scored with deep canyons; to the south, on either side of the Waterton lakes are the lofty summits of the Citadels and mount Cleveland, standing black and dismal before a background of snow and ice; northwesterly, three great conical peaks, conspicuous with their bared summits of slippery crimson shale, mount Blakiston, Anderson's and Newman's peak, tower over a myriad of lesser peaks and ridges. From the summit of any of these mountains the varying scenes of lakes, long, trough-like valleys, distant fields of snow and ice, or broad expanses of prairie are equally imposing.'



Upper Waterton Lake.



In Waterton Lake Park.

No. 6.

REPORT OF THE FOREST RANGER IN CHARGE OF WATERTON LAKE PARK.

WATERTON MILLS, ALBERTA, March 31, 1913.

The Chief Superintendent of Dominion Parks,
Edmonton, Alta.

SIR,—I have the honour to submit this, my third annual report in matters pertaining to the Waterton Lake Park.

This park is, on the south, within about two miles of the United States Glacier National Park and can be easily reached from Macleod, Pincher or Cardston, Alberta. A United States forest ranger is stationed on the international line, on which a constant patrol is now established, a great assistance to our own rangers.

ROADS AND BRIDGES.

The facilities now afforded by good roads will doubtless be an incentive to future tourists. The district has made many improvements and there is now a fine wagon road through the park to the base of the mountains to connect with a pack trail to the United States line. During the month of March a solid bridge was built on Pass creek; there is also one on Cameron creek from which a fine view of the falls can be had.

VISITORS.

There was a marked increase in the number of visitors to the park during the past year, although the season was unfavourable on account of a great deal of rain and the immense crop which had to be attended to; there was also the ‘Stampede’ at Calgary. Among others who came here were the superintendent and supervisor of the

25—v—5

Glacier Park, Mr. Riggs, of Baltimore (capitalist), and Mr. McLain of the Camp-fire Club. All were delighted with the park. The total number of visitors was approximately:—

Registered at hotel—		
Americans	40	
Canadian and English	604	
		644
Campers, visitors—		
Americans	150	
Canadians and English	1,000	
		1,150
Total		1,794

ACCOMMODATION.

There is a hotel at the lower end of the upper lake and the wagon road. Here is found the most beautiful scenery, with all the charm of woods and mountains, deep ravines and beetling crags, over which mountain sheep, bears and goats are often seen and photographed. In connection with the hotel, tents can be secured by those who prefer camp life. There is a large ball-room and, on a flat adjoining, football, cricket, etc., can be indulged in. Ponies or light rigs can be hired to visit distant points of interest.

BOATS.

There is a six horse-power gasoline launch and several row boats on the lake, all of which are busy every day.

GAME.

Owing to the strict enforcement of the park regulations, game has greatly increased. Several bear, deer, sheep, etc., were seen and geese remained with us until the 22nd December; on the 4th January about 200 Mallard ducks were on the river.

FISH.

The fishing was very good, some large trout were taken. No netting is allowed.

FUTURE REQUIREMENTS.

A bridge on Maskinonge lake, an arm of which runs across the road to Cardston and Macleod, is much required, as is also a ferry or bridge on the Waterton river.

The improvement of the park trail to the international boundary line is strongly recommended, as also a trail to lake Bertha and the improvement of the trail to Oil City.

I would further call your attention to the fact that the boundary lines are unsurveyed and the people of the district, as well as our brother sportsmen over the border, still live in hope of the extension proposed so as to connect with the Glacier game preserve.

I have the honour to be, sir,
Your obedient servant,

JOHN GEORGE BROWN,
Forest Ranger in charge of Waterton Lake Park.



Waterfall in winter, Jasper Park.



Ice Crevasse on Robson Glacier.

JASPER PARK.

GENERAL DESCRIPTION.

Jasper Park, the latest of the Dominion Parks to be established, is situated in northern Alberta, along the line of the new Grand Trunk Pacific through the Yellow-head pass. It comprises an area of 1,000 square miles—10 miles on each side of the railway from Parkgate to the pass. Although only a small part of it has been explored, the scenic attractions already discovered leave no room for doubt that it will be one of the most attractive of the Dominion Parks. It possesses innumerable snow-capped peaks, waterfalls, canyons and crystal lakes, and at Miette, 14 miles from Fiddle creek, some remarkable hot springs have been discovered, which seem likely to rank with the famous springs at Banff. These springs have a temperature of from 112° to 128° Fahrenheit, and possess valuable curative properties.

The main valley of the park is the Athabaska, along which the railway line runs. It is from one and one-half to three miles broad, and affords wonderful panoramic



Mount Robson, Evening, from the Valley of the Fraser.

views of the ranges of snowy peaks, thrusting their rugged heads often above the clouds. The Athabaska river widens out in the park into two fine lakes, Brulé lake and Jasper lake. To the south of Brulé lake rises Folding mountain, a peculiarly shaped rocky mass with precipitous sides. A little to the west of the lake is Fiddle Creek townsite, near which the Grand Trunk Pacific plans to erect a fine hotel, the Chateau Miette, to cost one-half million dollars. One of the sights of this district will be the Fiddle Creek canyon, with sheer walls of rock over 200 feet high. From Fiddle creek a trail now leads to the hot springs, but it is intended in the near future to build a carriage road which, when completed, will be one of the finest scenic drives in the mountains.

Twenty-five miles west of Fiddle Creek is Jasper townsite, the official headquarters of the park and the residence of the superintendent. The town has an ideal situation on the north bank of the Athabaska, and has been laid out on artistic lines which provide for future development in the way of parks, drives, business and residential sections.

Four miles from Jasper is Pyramid lake, a future resort for summer residents. The drive to this lake is a very beautiful one and affords magnificent views of the Athabaska valley and distant peaks. On the other side of the river are seen two little lakes lying together at the foot of the mountain, one of which is a lovely blue and the other a brilliant emerald. Pyramid mountain, so called from its shape, is one of the finest in the park, and is composed of vari-coloured rock and, when seen under bright sunshine reflected in the lake below, forms a picture one is not likely to forget.



Photo by B. W. Mitchell.

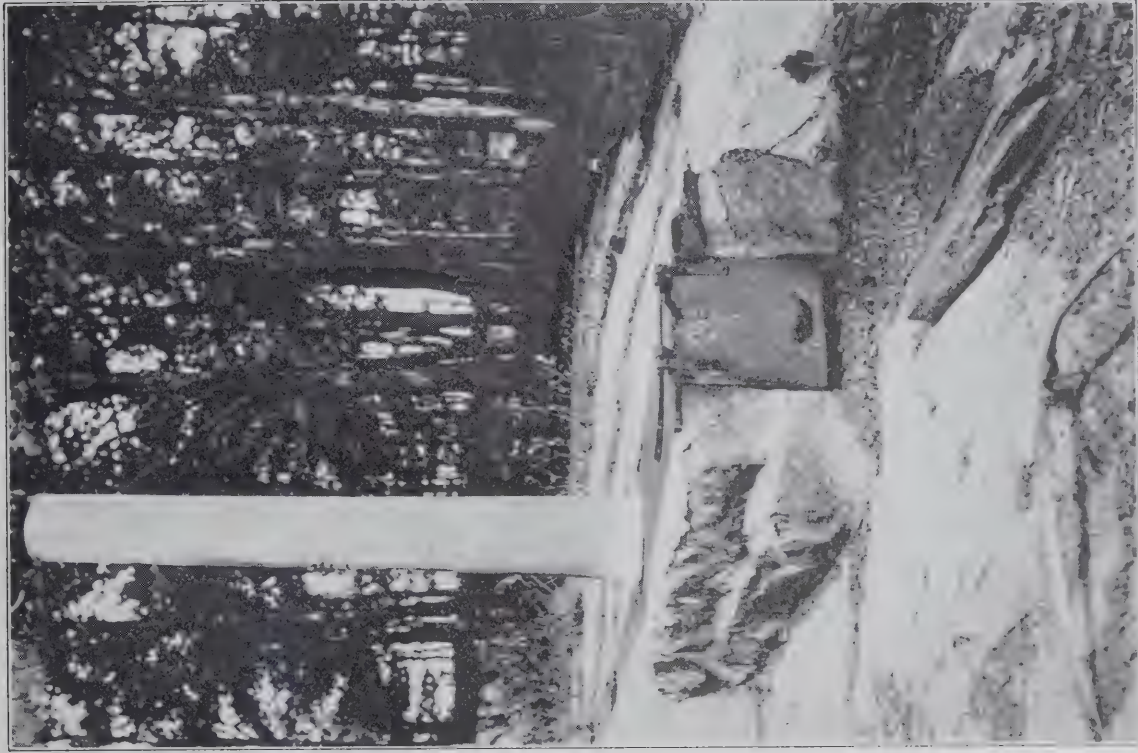
Evening on Pyramid Lake, Jasper Park. Mt. Geikie in Distance.

One of the most beautiful spots accessible from the park though not within the present boundaries, is Maligne lake. This lake was discovered by Mrs. Schäffer in 1907, and bears the reputation of being the most beautiful lake in the Rockies. Its waters are of a wonderful clear blue colour and the composition of the pictures formed with the surrounding mountains is said to be unequalled.

Trails are fast being opened up to all these attractive places, and when once the hotels are ready for the tourist, Jasper Park will be one of the most delightful places in the Dominion for a holiday.



Lake trout weighing 26 pounds, caught in Lake Minnewanka,
Rocky Mountains Park.



Stove at Picnic Island, near Brockville, St. Lawrence Islands Park,

ST. LAWRENCE ISLAND PARKS.

Among the Thousand Islands between Brockville and Gananoque, in Ontario, are a dozen islands, eleven of which the Government obtained by purchase from the Indians and one was conferred on the Government for public park purposes by gift of a private individual.

These islands have been improved and made suitable for recreation purposes for the public of the Dominion.

Nine pavilions have been erected on seven of the islands; tables and benches supplied; launch and skiff wharfs built, and outside stoves placed in convenient locations. These islands are now very much used in the summer for picnics and excursions, several hundred people at times congregating on some.

Caretakers attend to these small parks keeping them orderly and clean, and enforce the few necessary regulations for the protection of these public lands from acts of the thoughtless.

Most of the islands are thickly covered with small timber; oak, pine, hickory, birch, maple, cedar, balsam, poplar, chestnut and butternut predominating.



Bathing Bay at Beau Rivage Island, St. Lawrence Islands Park.

Underbrushing on most of the islands has been done during the past summer, but a great deal more is still necessary to render some of the islands easily accessible in all parts.

Action was taken against the depredations of the long-horned beetle, *elaphidion villosum*, which was boring into the branches of the oak trees on nearly every island and causing thousands of dead branches to strew the ground. These dead branches, containing the grubs, or larvae, were gathered and burnt and the evil was probably stayed in its incipency.

Some of the wharfs were found to require extensive repairs and the following was the work done on them:—

Beau Rivage Island.—Totally new flooring laid, substituting pine timber for hemlock and putting in all new joists in launch wharf.

Gordon, Georgina and Stovin Islands and Mallorytown Landing.—Partially new flooring in launch wharfs and skiff landings.

In addition to the above improvements there were numerous small renewals and repairs and painting done.

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Canada, National Parks Branch

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DEPARTMENT OF THE INTERIOR
DOMINION PARKS BRANCH

615

Annual

REPORT OF THE COMMISSIONER OF DOMINION PARKS

FOR THE YEAR ENDING
MARCH 31, 1914

1913/14

MAILED 1914

OTTAWA
GOVERNMENT PRINTING BUREAU
1915

Frontispiece.



The "King of the Herd."

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DEPARTMENT OF THE INTERIOR
DOMINION PARKS BRANCH

REPORT OF THE
COMMISSIONER OF
DOMINION PARKS

FOR THE YEAR ENDING
MARCH 31, 1914

OTTAWA
GOVERNMENT PRINTING BUREAU
1915

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DOMINION PARKS.

REPORT OF THE COMMISSIONER OF DOMINION PARKS.

OTTAWA, October 1, 1914.

W. W. CORY, Esq., C.M.G.,

Deputy Minister of the Interior.

SIR,—I beg to submit my report for the year ending March 31, 1914. Attached hereto are annual reports from the Chief Superintendent of Dominion Parks and from the superintendents of the various parks, covering the work accomplished during the year.

In previous reports, I have pointed out that in two important respects national parks very distinctly and very effectively serve public needs: one relates to the revenue they attract to the country by way of tourist traffic, the other relates to the service they render to the people of Canada through the facilities which they provide for recreation in the open air under the best conditions.

To emphasize the commercial value of national parks, I think that it is worth while assembling, with the new material secured in that connection, some of the more important figures given in previous reports. In an earlier report I have shown:—

1. Annual revenue of France from tourist traffic.. . .	\$500,000,000
2. Annual revenue of Switzerland from tourist traffic	150,000,000
3. Annual revenue of Italy from tourist traffic.. . . .	100,000,000
4. Annual revenue of Maine, U.S.A., from tourist traffic.. . . .	40,000,000
5. Annual expenditure of American tourists in England.. . . .	25,000,000
6. Expenditure of American tourists abroad in 1910..	350,000,000

The United States Bureau of Statistics has made a calculation in regard to the amount of money spent abroad in 1912 by American tourists. On the basis of 800,000 persons sailing from the United States in 1912, it is estimated that 400,000 were tourists and that each of these spent on an average \$1,000 on the trip, making a total annual expenditure abroad by American tourists of \$400,000,000.

It is calculated that from \$25,000,000 to \$30,000,000 is spent each year by tourists in the three great tourist cities, London, Paris, and Berlin. Figures have been compiled by the New England railway lines with respect to tourist traffic in the New England States, in these states there are 4,406 hotels and boarding houses capable of accommodating 221,141 people. In 1913 these accommodated 1,400,000 guests, and it is calculated the tourists spent there not less than \$100,000,000.

Mr. W. T. Robson, organizer of the Canadian Travel Association (formerly General Advertising Agent of the Canadian Pacific Railway), has prepared a careful estimate of the amount of money spent by tourists in Canada last year. His figures are \$50,000,000. Startling as it may appear, these figures place the value of tourist traffic in the fourth position with respect to revenue from Canada's national resources. The comparison is:—

Field crops, Canada, 1913	\$509,437,000
Forest products, Canada, 1913	161,093,000
Minerals, Canada, 1913	102,300,000
Tourist traffic, Canada, 1913.....	50,000,000
Fisheries, Canada, 1913	43,667,000

The figures compiled are calculated to emphasize the tremendous commercial potentialities of the tourist traffic. Nothing attracts tourists like national parks. Therefore, national parks provide the chief means of bringing to Canada a stream of tourists and a stream of tourists' gold. With the natural attractions and wonders possessed by Canadian parks in particular and Canada in general, it seems obvious that a proper and adequate development of Dominion parks means that millions of dollars annually will be brought into Canada by tourists.

It is perhaps as important to keep Canadian money in Canada as it is to attract foreign money to the Dominion. I have not been able to get any figures in regard to the amount of money spent by Canadians at American resorts, but a moment's thought will convince any one that it will total many millions. Even the money spent abroad is very great. The steamship figures of eastbound traffic during 1912 from Canadian ports are: first cabin, 8,607 and second cabin, 25,519.

I am assured that \$600 per first-class passenger and \$300 per second-class passenger, is a modest estimate as to the average expenditure by such passengers abroad. While, of course, all these people are not tourists, and, for that matter, are not all Canadians, the figures give a basis upon which to make a calculation as to the money annually spent abroad by Canadians, and the calculation is that the total is nearly \$15,000,000.

The development of national parks which give Canadians an opportunity to see incomparable scenery and enjoy unequalled opportunities of recreation under the best conditions, means keeping a portion at least of this money in Canada.

In the United States there has been an active movement whose slogan is: "See America First." The slogan which Canada's outstanding advantages in the way of natural scenic and other attractions justify using in regard to parks' development in Canada is: "See America's Best."

Every step taken in connection with Dominion Parks' work is taken on the principle that they are entirely "Service Parks"; that is, they exist to furnish distinct, effective, and necessary service to the people of Canada. The commercial side of parks already dealt with, constitutes a real service to the people of Canada, but the most important service which the parks render is in the matter of helping to make Canadian people physically fit, mentally efficient, and morally elevated.

The Act under which parks are administered calls them "parks or pleasure grounds." In reality they are entirely pleasure grounds; their mission is to provide, for all Canadians, facilities for obtaining pleasure by play in the broadest meaning of the term. I say this because in its broadest sense, it is wide enough to cover all those elements provided by parks which are so necessary for man,—fresh air, exercise, sunshine, the mental and moral exhilaration which comes from beautiful scenery and life close to nature, and the marvellous tonic properties of play.

The play spirit seems to be one of the strongest instincts in the human being. People strive for wealth chiefly in order that they may provide themselves with more pleasure and more play; they emigrate from one country to another, not so much to secure better food or clothes, as to enable themselves financially and otherwise to do better, in order that they may introduce more joy into their lives. The dominant character of this play-spirit of humanity is indicated by the gigantic sums of money people spend annually upon it. Travel, theatricals, ball games, athletic contests, golf, automobiles, clubs and race courses,—all these and many more are sought by man through his instinct for play. The marvellous development in connection with the moving-picture business is evidence, if any were necessary, that the poorer people share equally with their richer brothers the craving for joy and recreation.

In the final analysis, people play because of the results that follow, whether the play be in the form of athletics, or entertainments, or outings, it matters not, they feel—they know—they have been benefited by it: the recreation has been a tonic for them. If a man is sick of body or weary in mind, the remedy suggested to him by

the physician is change of scene, removal from conditions that interfered with the "play spirit," the remedy in reality is play in its broad sense. Most people take holidays in the summer in order that they may be "toned up"; and holidays after all mean play. It therefore seems that play is essential to the well-being of man; if he is weakened, play is one of the most important means to effect his restoration.

It is often a subject of wonder that successful business men remain at work long after they have accumulated vast fortunes. It is well recognized that, in many cases, successful business men who suddenly relinquish business fail in physical and mental health and die. Is it not that their business has become to them a game that it is in reality play and that loss of the "play-spirit" has meant the loss of the sovereign panacea which nature has provided for the maintenance of their health.

The study of history shows that in the ages when the "play instinct" reached its highest development the national life was also at its fullest. The "Golden Age" of Greece is the most notable example; but, in the age of chivalry in Europe, in the Renaissance of Italy and the Elizabethan age in England, there are evidences of the high development of the "play instinct." In the Elizabethan age the "play instinct" reached its highest; England was truly "Merrie England," and all the national life seemed to break into flower. Art, literature, learning, invention, discovery, and adventure were its products. When the reaction came in the Puritan age which followed, national life became sterile, art and literature died. In all ages the absence of the "play spirit" in national life has meant a deterioration in that life through a lack of the vividness, joyousness and liberty out of which national art, invention and heroism have come.

Sir Oliver Lodge in "Modern Problems" says:—

"What again was the main purpose of an Englishman in the time of Elizabeth? Was it not in the fullest and freest sense to live, to develop his life and that of others in the largest manner, to travel and see the world, to depict human life in the drama, to enjoy fresh air and open country and scenes of joyousness? Prof. Bradley has told us how men's minds were filled with the sense of largeness and beauty in the world, which new discoveries and the opening of ancient literatures had almost created anew for them. Life was a thing to be rejoiced in and made much of; even the life of the common people seemed joyous, and its development a worthy theme for poetry and romance. And the result was a patriotism capable of repelling an Armada, and a literature which in some respects surpasses everything that has been done in the world, before or since."

Within recent years there has been a movement, particularly in Europe and the United States, generally referred to as the "Recreation Movement." It has had much to do with the wonderful progress that has been made with respect to supervised playgrounds for children, but its field is much greater than that, and concerns play for adults as well. It has had its origin through recognition of the fact that modern social and industrial conditions are resulting in a suppression or a perversion of the "play spirit," and that this spells danger for the nation as well as for the individual. These adverse conditions exist both in the city and in the country.

To many people in cities, life means long hours of labour amidst the dust and whirr of wheels, an excessive nervous strain, and joyless, monotonous employment; to many of them life is a grind, a round of labour, a season of care, on top of which are conditions of overcrowding. The dangers that threaten, the evils which have been constantly increasing in industrial centres, are a degeneration in physical type, a deterioration in mental and moral quality. The natural course under the existing conditions leads to the development of a dull, soulless, unimaginative people. For instance, it is well known that in the slums of English cities there has grown up, as a result of modern conditions, a well recognized type weak, hopeless, without

initiative, energy, or self-respect, which does not want to secure work and which has no power of "sticking to" work if it is secured—a type which is a menace to the race. Conditions in Canada have not reached the point that they have in the huge industrial centres of England; but England's experience constitutes a warning to Canada to make provisions now to guard against similar misfortune.

The industrial workers are not the only class who have suffered from modern conditions. The ideal of the past century has been the "Strenuous life" and it has pervaded all classes. The policy has been "work, work, work"! The necessity of recreation has not received the recognition due to it. An American writer thus refers to this condition:

"In America, while our minds have been drawn away to material conquests and accumulations, we have, all unconsciously, forgotten how to live; we have lost the tradition of play. In country-side and city we have cherished the ideals of work, not of play; we have apologized for leisure instead of making it divine."

City life means to many temptations which constitute a perversion of the play spirit. Cheap dramatics, low pool-rooms and probably most of the saloons are instances of unworthy relaxation; in fact it is recognized that vice is largely caused by improper or inadequate recreation. It is certain that much harm follows the fact that in cities many young men have to seek recreation on the street corners.

Life in rural districts is also suffering from the stifling of the play-spirit; modern machinery and other improvements in the art of agriculture have meant greatly enlarged farms, and consequently a far more sparse population in the rural districts. In addition, the cities have largely drawn population to themselves at the expense of the farming districts. In this connection it is significant that in dealing with this question the Royal Commission on Technical Education (Dr. J. W. Robertson, Chairman) gives as one reason for this movement to the cities: "The attractiveness to young people of the amusements and excitements afforded by town and city life." People living in the country to-day too often find life an increasing round of toil with few opportunities for pleasure and recreation.

The adverse conditions in city life mean degeneration—physical, mental, and moral—for many workers. The adverse conditions in the country drive people to the cities, and at the same time put a blight of monotony and toil upon many of those who remain.

Howard S. Braucher, author of "Play and Social Progress" has drawn a vivid pen picture of the consequences of the loss of the "play spirit." He says:—

"Hunger, cold, loss of shelter, and needless pain, surely these are tragedies. Yet the climax of tragedy is not reached until one has unveiled another picture—that of a dwarfed, starved, unresponsive and joyless life. When the play spirit has been lost and the future is only one long drawn out work, work, work, which taxes the body but does not engage the soul, then tragedy has reached its climax.

"Every one, even the wealthy business man, may lose the spirit of play. Such a loss may not lessen the volume of work done, but it materially lessens its value. The present financial and industrial losses, due to underplay and consequent loss of power on the part of business leaders for one year alone would reach a startling amount.

"A lack of vividness, responsiveness and joy is in varying degrees to be observed in all walks of life, in our cities and in the open country. Few people are obtaining the maximum amount of joy, efficiency and power from their lives. The presence of the play spirit means adaptability, capacity for quickly appreciating the influences about them, keen enjoyment of the game, and a consciousness that there are other players besides themselves."

The ultimate purpose of national parks is to provide opportunities and facilities for wholesome play for all Canadians. Many are losing their play instinct because of the drudgery and strenuousness of their occupations; some would play in their leisure hours, but the facilities are denied them; others again, with their play spirit natural and vigorous, have to satisfy it with commercialized recreation that has much evil about it.

Play, or recreation in the parks means fresh air, sunshine and exercise—the most potential agencies which nature provides for the physical regeneration of man. It needs no argument to convince any one in these days of the necessity of pure air. Air is absolutely vital to life; man can live for some time without food or drink, but deprive him of air and he dies almost immediately. Sunlight, too, is of the utmost importance to the physical well being of man; it is not only inimical to the various low forms of life, like tubercle bacilli, which prey on man, but, as one health writer puts it, "Light should be welcomed by us as the first, best, and safest of stimulants and tonics when stimulation is desirable."

The condition of the body has a profound influence upon the brain; the latter can never be at its best when bodily health is impaired, and moral vigour is rarely evident if body and mind are weakened. The modern treatment for the "cure" of convicts—very successful in many countries and many states—is to put them at work in the open air, on prison farms or road construction. When fresh air, sunshine, exercise, and life close to nature cure those with criminal instincts, transforming them into clear-eyed, honest citizens, how can they fail to elevate the man who is without this handicap? It is superfluous to dilate on the value of fresh air, sunshine and exercise to the human being. The importance is instinctively recognized. The only duty is to provide ample facilities for the people to secure them.

This is the reason why in my report last year, I emphasized the necessity of securing national parks or playgrounds throughout the entire Dominion; they are necessary to the well being of the public. Their necessity will become more and more apparent as population increases and life becomes more complex, and, if they are not secured now when land is available and cheap, there can be little hope that reservations adequate to the needs of the country will ever be secured, which will mean failure to provide for all the right and facilities to play under wholesome conditions.

During the past year extensive development work has been carried on in the various parks. Rocky Mountains park, with Banff as its principal town, received most attention, because the hot sulphur springs at Banff, and the grandeur of the scenery in the Lake Louise district, attract by far the largest number of visitors. A great deal of attention was paid to conditions at Banff itself, as it is visited by almost every tourist. The work done chiefly concerned water-service, sewer-service, roads, walks, and similar matters which ultimately affect the comfort and safety of tourists.

An important service was rendered to Rocky Mountains park by Mr. Harlan I. Smith, of the Geological Survey of Canada, in his reorganization of the museum at Banff. Mr. Smith undertook to devote his holidays without charge to the department to this work, and in a short time, and at trifling cost, completely made the Museum over. While the Museum is small, the rearrangement has made it in many respects a model institution.

During the year the department of Marine and Fisheries established a fish hatchery at Banff; as the fisheries of the park had never fully recovered from the dynamiting and netting of the early years of railway construction, the hatchery was of vital necessity. The co-operation of the Fisheries Department in this connection has been a matter of gratification to all concerned in the welfare of Canada's most wonderful playground, as it doubtless will also be to the thousands of tourists to whom it will mean opportunities for good fishing.

By the construction of a large drain the department was able to reclaim a very large area of swampy ground, situated between the two sections of Banff. A portion

of this has been laid out as a recreation ground to accommodate the thousands of one-day excursion parties that daily visit Banff. An unusually handsome and useful building for recreation purposes was also erected on this playground.

During the year a new policy in regard to the disposal of lots in Banff was initiated. Experience had shown that in many cases speculators took up Banff lots without any intention of complying with the building conditions. The result was that persons who really desired to secure homesites for themselves either had to purchase from the speculators or do without lots, which meant that the progress of Banff was being retarded, and that bona fide lot seekers were compelled to pay money to speculators without any real value being received. To terminate this condition of affairs a vigorous policy of cancellation was inaugurated against lot holders who had failed to carry out the conditions of the agreements covering their lots. To give every one an equal chance to secure these cancelled lots, it was decided not to grant them to the first applicants, as had been the practice, but to dispose of them by public auction; it was also felt that this method of disposal would make it unprofitable for the speculator to endeavour to blanket lots as in the past. The experiment proved eminently successful and when a new subdivision—made necessary by the expansion of the town—was completed in the autumn, the lots therein were also offered by public auction.

A contract was made with Mr. T. W. Mawson, the world-famous landscape artist and town planner, for a rearrangement of the two sections of the Banff townsite. Mr. Mawson gave this work his personal attention, and has handed to the department comprehensive reports and plans covering this work; attached hereto is a copy of Mr. Mawson's general report.

A quantity of literature dealing with the parks was prepared during the year. Included in it are:—

A handbook of the Banff Museum, which is designed to cover in a popular way, the natural history of the Rocky mountains. This pamphlet was prepared by Mr. Harlan I. Smith of the Geological Survey, Ottawa.

"Glaciers of the Rockies and Selkirks," by Professor Coleman of Toronto University.

"The Nakimu Caves," a description of the wonderful caves and subteranean passages in the Cougar mountain district of the Selkirks.

A handbook of the Fisheries of Rocky Mountains park, by Mr. S. C. Vick, Fishery Inspector at Banff.

A handbook by Mr. Camsell, of the Geological Survey, designed to explain to the layman the marvellous history of the Rockies as read from the rocks by the geologist.

"Just a sprig of Mountain Heather," a booklet accompanied by a sprig of mountain heather from the Canadian Rockies. This publication was written chiefly to inform the public with respect to the real purposes served by the National Parks work.

Included in this report is a statement with respect to the annual camp of the Canadian Alpine Club. This club from year to year continues to do a great deal of work of the utmost importance to the Canadians mountains and Canadian mountaineering. Probably no one in Canada has a greater knowledge of, or a greater love for the Rockies than Mr. A. O. Wheeler, the capable and energetic Director of the club. To him and to his associates in the club is largely due the spreading of the fame of Canada's mountains to every quarter of the globe.

Mrs. Mary Schäffer, of Banff, the author of "Old Indian Trails" and, in collaboration with Stewardson Brown, of "Alpine Flora of the Canadian Rockies," delivered a series of lectures in Ottawa, Toronto, London, Winnipeg, Edmonton and other Canadian cities, which attracted very large audiences, and gave to her hearers a fascinating vision of the majesty and grandeur of Canada's western parks.

BUFFALO.

The Government buffalo herd continues to do well; there are now 1,535 buffalo in the two animal enclosures, Elk Island park and Buffalo park. The Elk Island herd shows an increase of eleven for the year making a total of eighty-two head; the Buffalo park herd shows a gross increase of 236 with a decrease of four bringing the number of animals now in the herd up to 1,453. This is more than twice the original number secured in 1907 from Michael Pablo of Montana, and is an indication of the success of the experiment. The animals are in excellent condition and are becoming tamer. Ten females from Rocky Mountains park were shipped to Wainwright during the present month, leaving seventeen males in the Banff paddock.

During 1913-14 the first real development work in Jasper park took place. Lieut.-Col. S. M. Rogers, the Superintendent, proved equal to the great task of transforming a wilderness—a wilderness of extraordinary scenic beauty—into a park; and even in one year he accomplished striking results.

Respectfully submitted,

J. B. HARKIN,

Commissioner of Dominion Parks.

APPENDIX No. 1.

REPORT OF THE CHIEF SUPERINTENDENT OF DOMINION PARKS.

EDMONTON, ALTA., April 1, 1914.

J. B. HARKIN, Esq.

Commissioner of Dominion Parks,
Ottawa, Ontario.

SIR,—I have the honour to submit herewith my second annual report as Chief Superintendent of Dominion Parks for the year ending March 31, 1914.

The reports of the superintendents of the different parks are tabulated under the headings as on previous occasions, viz.:—

1. Report of Chief Superintendent of Dominion Parks.
2. Report of Superintendent of Rocky Mountains Park.
- 2*a*. Report of the Curator of Banff Museum.
- 2*b*. Report of Nationalities of Visitors to the Hotels.
- 2*c*. Report of the Alpine Club.
3. Report of the Superintendent of Yoho and Glacier Parks.
4. Report of Superintendent of Buffalo Park.
5. Report of Superintendent of Elk Island Park.
6. Report of Superintendent of Waterton Lake Park.
7. Report of Superintendent of Jasper Park.

The fiscal year 1913-1914 was entered upon with a large amount of new development work projected in the various parks. These works have been completed well within the appropriations.



Interlaken from High Hill to the Southeast, Jasper Park. Fish and Jasper Lakes in Foreground.



Up Goodsir Creek Valley.



Prison Canyon on Mt. Rundle, near Banff.

ROCKY MOUNTAINS PARK.

The improvements carried out in this park consisted in the building of a road from the Canadian Pacific Railway Company's station to Banff avenue as far as Buffalo street. This road was an experiment, and I am pleased to report that the expectations of having a good thoroughfare on the main street have been fully realized. The centre of Banff avenue was laid out as a boulevard and planted with grass. With all the projected alterations this business section will be greatly improved.

The school trustees have erected a very handsome school to accommodate the large increase of pupils. A large brick stable and a storehouse have also been completed by the department, and the old school-house has been taken over and converted into Government engineers' offices, telephone exchange, and a much needed fire hall. A large amount has been spent in the grading of streets, building of sidewalks and opening up of new blocks for residential purposes.



New Fire Hall, Banff.

A number of new residences have been erected to house the ever-growing population which is being attracted to Banff by the grandeur of the scenery, the benefits to be derived from the invigorating atmosphere, the mineral waters, and the sulphur baths which can be taken at small cost at the different establishments under government and private ownership. The water and sewer extensions have been kept up to the requirements.

The road mileage has been considerably increased. There are now some thirteen good roads within the park limits, the mileage of which is over 100 miles. The automobile road is practically completed from the eastern boundary to a point about 5 miles west of the town of Banff; there is still an unfinished portion between Banff and Castle mountain, some 4 or 5 miles, and when this is completed, the motorist will be able to travel in comfort, enjoying the magnificent

scenery. From Castle mountain the road will connect with the Castle and Vermilion branch of the Alberta and British Columbia motor road through Sinclair pass. The main road will be continued in a westerly direction to that paradise of beauty—lake Louise. The Canadian Pacific Railway Company has spent a large sum in remodelling the magnificent hotels at Banff and lake Louise, in order to accommodate the tourist traffic from all parts of the world. Recreation grounds are being laid out, and a pavilion has been built, to afford to visitors every facility for healthful enjoyment.

A fish hatchery has been built for the restocking of the streams and lakes with the various species of trout, in order to afford the followers of Isaac Walton excellent sport during the open season.

Additions have been made to the Zoological Gardens, the chief attraction being "Pat," the Polar bear, disporting himself in his spacious plunge bath. All the animals are in excellent health.

The wild inhabitants of the park, including a number of deer, often visit the streets and avenues without fear of molestation; large numbers of wild sheep are often to be seen on the motor road 3 miles west of Banff. Tourists can study them at close range, and they are easily photographed, being so accustomed to the camera that they apparently enjoy the situation.

A winter "Sports Club" was organized, and to judge by the vigour and heartiness with which the toboggan slide and other sports were taken advantage of, the success of the venture was beyond expectation.

There are approximately some 600 miles of trails within the boundaries of Rocky Mountains park open to the traveller who desires to explore the hidden grandeur of the magnificent panorama which gradually unfolds before him, and is often unsurpassable. In order to make these trails easily accessible, I would suggest the erection of a series of "chalets" or rest houses about 10 miles apart, so that a tourist or traveller desiring to spend a considerable time in exploration may be assured of a haven of refuge after an arduous day's climb and tramp, where he can comfortably rest and regale himself with such provisions as he may have brought with him.

The great enemy of the park—fire—has not given great alarm this season; there were only two outbreaks in the town of Banff, the damage in one case being very small. The second fire occurred on February 7, of the present year in the old frame portion of the "King Edward" hotel, which was totally destroyed. It was one of the coldest days of the season, some 20 degrees below zero, but, in spite of the low temperature, the volunteer fire brigade did splendid work.

The total number of visitors to the park, registered at the different hotels, showed a decrease of some 12,800 as compared with last year, owing no doubt to the unfavourable weather and general financial depression.

YOH0 PARK.

The work undertaken in Yoho park consists of general repairs and widening of the many roads which lead to the different scenic centres. Considerable changes were made in the road system; many small bridges were dispensed with by diverting the roads to higher ground, at the same time improving the general alignment. A considerable quantity of gravel was hauled and placed on the main road to Emerald lake, which is now in "first-class" condition. Maintenance work on new roads will be done by sectionmen, who will be housed in log cabins, three of which will be built during the coming year. On the Yoho drive, owing to the Kicking Horse river changing its course during high water, a large amount of rock-filled cribwork was built to divert the stream and protect the road from being completely washed away. The road was gravelled and is now in good order. At one point the alignment will be changed, to cut a short, dangerous grade, a little distance west of the Yoho and Kicking Horse rivers.

There are many trails leading to a number of new scenic points which have been annually repaired, but not extended, so as to enable tourists to return to the starting point by a different route, making the round trip. It is proposed to extend these trails during the coming season, to meet the desire of the many tourists who go to Field specially for the purpose of enjoying the scenery by walking, rather than riding the usual mountain pony.

GLACIER PARK.

Construction work on the new road to the Nakimu Caves was continued during the latter half of June, and the months of July, August, and September. About two miles of new road were completed, but there is still about 6,000 feet to be built.



Illecillewaet Glacier, Glacier Park.

Several requests for new trails, and repairs and renewing of some small bridges, have been made. All visitors to the park praise the surroundings, and the numbers will naturally increase as the trails are made more accessible. The proposed trail to the Great glacier was diverted at a point about timber line, carried across the glacial stream and joined with the old trail leading to the foot of the ice field. A new location was necessary, as the moraine on which it was proposed to build the trail has completely obliterated that portion which had been constructed.

The Canadian Pacific Railway Company is building a 5-mile tunnel through mount MacDonald and a Government inspector has been placed at each end of the tunnel, his duties being to safeguard the interests of the park in every way.

BUFFALO PARK.

The farming operations carried on at Buffalo park during the year just closed were highly satisfactory. The area under cultivation was considerably increased.

There are now 300 acres of good rich soil for raising fodder for the buffalo and work-horses. The crop of oats this year, owing to the favourable weather conditions and good farming methods, averaged 47 bushels to the acre. It is proposed to break an additional 300 acres and work the two parcels in rotation. Haying operations resulted in stacking for winter use some 900 tons of excellent hay. The old hay was dealt out first, and the new hay held in reserve, so that the question of feed for the coming year is amply provided for.

Additional accommodation has been provided at winter quarters for the proper stabling of the work-horses. A commodious barn has been erected which will accommodate 31 head. The loft will hold some 40 tons of hay, and there is ample space for taking care of several hundred bushels of oats. A harness room is also one of the features of the new structure. The farm hands at winter quarters have been provided with a comfortable frame cottage, which will be greatly appreciated. The men are now more contented, as prior to the building of this cottage the hired help lived in tents and a dilapidated log shack.



Moose in Wainwright Park.

Photo by F. W. Bell.

To prevent the destruction of the deer which frequent the western end of the park, a game warden was required; an efficient patrol has now been established, and a suitable frame lodge and stable erected. A lodge has been erected at home quarters as sleeping accommodation for the men. Up to this time they slept in the hay loft over the stable. Additional horses were purchased to carry out the farming operations properly, also to provide spare mounts for the patrol riders.

The buffalo show a net increase of some 300, for the year, all are in a flourishing condition. They are becoming much tamer, owing to the continual presence of the patrol riders among them, and before long we hope to have them as tractable as domestic cattle. Ten head have been shipped from Banff to this park, and as soon as some typical male specimens can be selected, they will be sent to Banff to replace those removed from there.

The moose have eaten down the browse to such an extent that it has been found necessary to turn them out into the large park in order to give the willows a chance



Pot Holes in Old River Bed, Maligne Canyon, Jasper Park.

to grow and recuperate. Two male moose are held in the home park for exhibition purposes.

The elk are in exceptionally fine condition, two of their number are quite tame and will approach the visitor when offered food. The antelope are doing well, especially one lone buck who has made friends with two bull buffalo and is rarely to be seen except in their company.

The feathered tribe are taking full advantage of the protection afforded them by the park being fenced. Prairie chickens are to be seen in great numbers, ducks and geese breed in the numerous lakes. Judging from the many lodges to be seen on the lakes and sloughs within the park area, the muskrats have colonized and are in great numbers.

There is an increase in the numbers of visitors, and it is expected when the Grand Trunk Pacific Railway has completed its main line, and is advertising Buffalo park as a resort for tourists, the patronage will go up by leaps and bounds.

A telephone system is to be installed in the near future; it will fill a much-felt want.

ELK ISLAND PARK.

The work of improvement in this park consisted in cutting out the old buffalo trails, clearing up underbrush, ploughing a fire guard, and opening up a road to reach the east end of the lake, locally known as "Sandy Beach," where there is excellent bathing.

Two of the many islands have had the heavy underbrush cleared off and burnt to make them accessible to camping parties. The picnic grounds have been enlarged by the cutting out of a quantity of scrub, poplar timber and brush. Rustic seats have been provided, and a short dock built to provide a landing for row boats.

The buffalo, moose and deer are doing very well. This park is especially adapted to the raising of moose, there is plenty of browse, and no danger of a shortage for some time to come.

The number of visitors has increased, owing no doubt to the park becoming more favourably known. The lake with its many islands affords an ideal pleasure resort.



Cameron Lake, Waterton Lakes Park.

Photo by Riggall.

WATERTON LAKE PARK.

The work carried out in this park consisted in widening and re-grading the roads, and clearing the roadways within the surveyed townsite to enable owners of lots to gain access to their holdings; the bridge over Pass creek was repaired, a short trail cut out to lake Bertha and the wagon road to Oil City considerably improved. The boundaries of this park should be extended as its area is very small, consequently the scenic points are few.

A large number of people from Lethbridge, MacLeod, Pincher Creek, Cardston, and other towns motor down to the park and spend the week-end in enjoyment of the excellent fishing and boating to be had there. A hotel is being built to accommodate the tourist traffic.

A safe means of crossing the Waterton river is urgently needed. When improvement in this matter has been provided many people who are now afraid to cross the treacherous ford will be attracted to Waterton Lake park. The view of the varicoloured mountains is alone worth the excursion.

JASPER PARK.

A change was made in the administration of Jasper park, Lt.-Col. Rogers being appointed to succeed Mr. Byron Burton. A small staff was organized, the various positions being filled temporarily by persons already at Jasper. A survey party was sent out, and the road to Pyramid lake laid out in record time; a road crew was then placed on the work and the construction prosecuted with vigour. Instead of a 16-foot roadway, as had been projected, it was decided to build only a 10-foot roadway, in order to enable visitors to reach the shores of Pyramid lake as soon as possible and enjoy at its best the beautiful scene of mountain, lake, and river.

Jasper park has the advantage of being served by two transcontinental lines which traverse its length from Dyke to Yellowhead on the Grand Trunk Pacific. The pass is so narrow that the two railways utilize the one right of way and double track for a considerable distance. There are scenic points of much beauty on both lines and, when the length and breadth of the park are fully explored, each railway will have special attractions for the tourist who desires to see the beauties of Jasper park.

About 42 miles of trails have been constructed and repaired during the past year, and others to points of interest outside the boundaries of the present park are under consideration.

The exploration of Sulphur creek revealed a succession of beautiful waterfalls, which are at their grandest during the spring run-off. A trail can be built to reach the most distant fall, and from there to "Lookout-Point; from this elevation a magnificent panorama spreads before the tourist. The trip can easily be made in one day, taking the hot sulphur springs as the starting point.

Six miles of roads have been constructed outside the townsite area, the streets of Jasper have been graded and many other improvements made. The administration building has been completed, and is now occupied temporarily by the superintendent as a residence, a portion of the building being set apart for the present requirements of the clerical staff. A temporary bridge has been constructed across the Athabaska river to Maligne lake and the Maligne canyon.

Forest fires of previous years have sorely marred the beauty of the park, but it is pleasing to note the second growth making a valiant attempt to restore Jasper to its original state. Thousands of cords of pit props and dry wood can be cut on the Maligne trail close to Jasper, and this should be done, as the present quantity of standing dead timber and windfalls is a danger in the event of fire, which might start from many unknown causes on the east side of the Athabaska river. One forest fire at Geikie burnt for a considerable time in the deep moss, and fanned by a strong

wind travelled at a rapid rate; a large force of men was called out, but their labour was practically in vain. The fire burnt up to the snow line when it was finally extinguished by a heavy shower of rain.

In concluding my report I desire to express my sincere thanks for the support which I have received at all times from the department and the superintendents of the different parks, and trust that the work which was commenced, and has been carried out to such a successful conclusion well within the estimates provided for the national parks will redound to the credit of all engaged, from the highest to the lowest.

My duties of superintending and visiting the different parks under my jurisdiction entailed travelling no less than 23,000 miles, in addition to the routine business of my office. My staff, small as it is, deserves the highest praise for the painstaking manner in which every detail has been kept up to date.

The revenue of all the parks shows a gratifying increase, and I trust the coming tourist season will eclipse those of former years. The weather conditions of last year were very unfavourable, the tourist is not encouraged to venture forth in torrents of rain to search out the hidden beauties of that heritage placed in our keeping, the national parks of the Dominion of Canada.

I have the honour to be, Sir,

Your obedient servant,

P. C. BARNARD-HERVEY,

Chief Superintendent of Dominion Parks.

APPENDIX NO. 2.

REPORT OF THE SUPERINTENDENT OF ROCKY MOUNTAINS PARK.

BANFF, Alberta, April 1, 1914.

The Chief Superintendent of Dominion Parks,
Edmonton, Alberta.

SIR,—I have the honour to submit my first annual report as Superintendent of the Rocky Mountains park, and have pleasure in reviewing the work of a year of achievement. The work which the appropriation made possible has greatly improved the appearance of the town of Banff; has improved and extended the water and sewer facilities; has helped to open up some of the most beautiful spots on the continent which had previously been unknown, and were inaccessible to all but the most experienced trail blazers, and has very appreciably hastened the time when the park will be accessible *via* fine roads from both east and west. The expenditure of this money has also improved the facilities for the recreation of the many thousands of tourists who visit Banff and other parts of the park during the summer season. This "season" appears to be lengthening yearly, if the fact that the Canadian Pacific Railway hotel at Banff was the only hotel closed down during the winter season be taken as a criterion.

Probably the most important work of the year has been that of road-building, and the principal portion of this work has been in connection with the automobile road. This road, which will be completed in the spring or early summer of this year, will traverse the whole length of the park from east to west, connecting with the road from Calgary at the eastern boundary and with the British Columbia Government road in the west, making possible vehicular trips through the Rocky mountains to the



Photo H. G. Gordon.
Rocky Mountain Goat, Rocky Mountains Park.



Cut Throat Trout and Bull Trout from Hogarth Lake.

east, and opening up some of the most beautiful and inspiring scenery in the world to travellers by conveyance other than the railway car.

The other great work of the year was that of water and sewer extension, the record of which eclipses that of all previous years and which is dealt with elsewhere.

The usual maintenance work has been done where required.

FIRE AND GAME PROTECTION.

Owing to the heavy rainfall during the summer few forest fires were reported, so that little damage has been done within the park in this respect. The railway is our most dangerous source of fire; but the Canadian Pacific Railway fire patrol, working in conjunction with our game wardens' patrol, has lessened this danger to a very great extent.

A new fire trail has been cut along the south side of the Bow valley, from the Castle-Vermilion automobile road to a point on the Banff-Simpson Pass trail, a distance of seventeen miles. This trail will greatly facilitate matters in the event of fire breaking out, say at a point on the railway, and, aided by wind, jumping the Bow river, as has occurred in the past. It is our intention to continue this policy of opening up fire trails as occasion arises.



Photo by H. G. Gordon.

Herd of Wild Rocky Mountain Sheep, near Banff.

Game of all kinds is becoming very numerous all over the park, as may be seen by any one who takes a trip up any of the valleys leading out of Banff, and I am pleased to be able to state that only one infraction of the game regulations has been reported by the wardens during the year.

A number of shelter cabins for the use of the wardens has been erected, and it is our intention to continue erecting these cabins at suitable distances all over the park as opportunity arises. In this connection I might point out that, as the work of erection is being undertaken by the wardens themselves, the cost is very low. The wardens are also employed during the beginning of the season each year in clearing out all



Entrance to Ice Cave, Bow Glacier.



Bow Glacier, Bow Lake Trail.

fallen timber on the trails. This work has to be done each spring, as the high winds during the fall and winter of each year bring down large numbers of dry trees.

It is our intention to have a trail cut next season from the mouth of Red Earth creek to Shadow lake and mount Ball (altitude 10,825), opening up to tourists a number of beautiful lakes and great glaciers, thence over to Simpson summit, giving tourists easy access to these beautiful spots which are only a comparatively short distance from Banff, and opening up an entirely new portion of the park.

PROTECTION OF FISHERIES.

As fishing is one of the great attractions of the park, it was thought necessary to have a special officer to look after that branch and a fishery inspector was accordingly appointed in June. The inspector, in addition to his other duties, is compiling a classified fishing guide for the whole of the angling waters within the park boundaries.

On searching lake Minnewanka with a view to discovering whether unlawful fishing were going on, the inspector found night lines with dead fish on them, though he did not catch those by whom the lines had been set. The knowledge that a special officer is on the lookout for such infractions of the law, is expected to be a deterrent in future, and it is probable that dynamiting and trapping in the lakes and streams will now come definitely to an end.

The new fish hatchery, a very handsome structure of its kind, containing equipment of the most modern description, is situated between Glen and River avenues, and has a hatching capacity of more than three million fry. Cut-throat trout and lake trout will be hatched here, and at present there are one million lake trout ova in the hatching trays, which will be put into the streams and lakes in the spring. When the spawning season arrives, two million ova of the cut-throat trout will be gathered and hatched out in this institution, and, when sufficiently matured, will be turned into the waters of the park in like manner. The Marine and Fisheries Department, by whom the hatchery was built, also intend putting in ponds where fish of larger size will be kept, which will greatly increase the interest in this work to visitors.

TRAILS IN THE PARK.

The following is a list of the trails in the park compiled this year by the chief fire and game warden, with notes on the principal points of interest along their routes. (The distances given are only approximate, but do not in any case overlap previously mentioned trails):—

1. *Bow lake and pass.*—Thirty-three miles from lake Louise.

Points of interest: Bow valley, Hector lake or lower Bow valley, lakes Margaret and Turquoise, Upper Bow lake, Bow glacier, Crowfoot glacier, Balfour glacier, Waputik icefields, mounts Gordon, Balfour, Bow, Pulpit, Portal, Observation, Dolomite, Peyto lake and glacier, Observation point with wonderful view north.

Trail continues down Bear creek to the Saskatchewan, and thence in all directions.

2. *Molar pass.*—Twenty miles. From Bow trail to Pipestone trail. Mosquito creek, High pass, Molar creek, mount Hector and mount Molar.

3. *Dolomite pass.*—Nine miles from Bow trail to boundary of Park. Trail continues down Doone creek to Siffleur. Dolomite pass, altitude 7,905 feet. Lakes Katherine and Helen.

4. *Pipestone Pass trail.*—Twenty-eight miles to summit. Altitude 8,364 feet. Mounts Richardson, Hector, Molar, Cataract, many unnamed lakes, falls, caves, etc.; trail continues either down the Siffleur or over Clearwater pass.

5. *Little Pipestone trail*.—This can be followed either of three ways: to Red Deer summit, to Baker lake or to Ptarmigan lake, all of which are delightfully wild, each about 9 miles distant. 14 lakes can be seen from one point on this trail.

6. *Ptarmigan Lake trail*.—Twelve miles. Ptarmigan lakes, Baker lake, Carroll creek, mounts Fossil, Oyster, Ptarmigan, Pika, Redoubt; grand views to the south of the lake Louise mountains and Ten Peaks. Altitude of Ptarmigan lakes 7,561 feet.

7. *Red Deer Summit and Douglas lake*.—Nine miles. North and south towers of mount Douglas, mount Drummond, Summit lakes, Douglas lake, Silver Serpent lake, Moonstone falls, Natural Bridge.

Trail continues down the Red Deer.



Seracs on Waputik Glacier, Bow Trail.

Photo by Byron Harmon.

8. *Baker Creek trip*.—Eleven miles. Baker Creek valley, mount Redoubt, Heart lake, and others.

9. *Johnson creek*.—Twelve miles. Canyon lakes, Castle mountain, Bonnet peak,

10. *From Baker to Johnson Creek*.—Eight miles. Summit lakes, etc.

11. *Hillsdale trail*.—Five miles. A short cut from Johnson creek to Hillsdale or Massive. Fine views up and about Bow valley.

12. *Mystic Lake trail*.—8 miles. Leading from Johnson creek east, Sawback range, Mystic lakes, Forty-mile creek.

13. *Mount Edith and Sawback lakes*.—Twenty-one miles. Vermilion lakes, mount Edith pass, mounts Edith, Louise, Norquay, Sawback lakes, and creek to Cascade river.

14. *Flint and Johnson creeks*.—Ten miles. Flint park and Block mountain.

15. *Bijou Pass*.—Fifteen miles. Harrison lake and Panther falls.
16. *Cascade river*.—Twenty-three miles from Banff. Animal pasture, Bankhead coal mines, Stewart canyon, Cascade mountain, Stony creek.
17. *Cut Head and Wigmore*.—Twelve miles. Lakes, coal seams and Panther falls.
18. *Snow creek*.—Fourteen miles. Panther falls, Bare mountains, White creek. White mountain and Prow mountain.
19. *Panther river*.—Eighteen miles. Sulphur springs, coal seams, Panther mountain, White mountain.
20. *South branch of the Panther to Cascade*.—Twenty miles. Great game and fish country.



Lake McArthur, Trail 24.

Photo by Byron Harmon.

21. *Stony creek and Ghost river to Gap*.—Eighteen miles. Mount Aylmer, Castle Rock, Devil's Head, point where river disappears.
22. *Aylmer pass, lake Minnewanka and Ghost river*.—Thirty miles. Aylmer canyon and mount Alma, Costigan, Minnewanka, Inglismaldie, Girouard, Peechee. Devil's Gap, Saddle peak.
23. *Carrot creek to lake Minnewanka and south fork of Ghost river*.—Twenty-five miles. Peechee, Fairholme, Saddle and End mountains.
24. *Great Divide and Bath creek and Lake O'Hara*.—Twenty miles. Daly and Niles glaciers, mounts Hector, Stephen, Cathedral, Field, Odary, Lefroy, Biddle, Wiwaxy peaks, Victoria, Park, Schaffer, Opabin: lakes Summit, Sink, Wapta, O'Hara, Oesa, McArthur, and Grouse.
- Trail continues down McArthur creek.



Mts. Hungabee and Schäffer, Trail 24.

Photo by Byron Harmon.



Mt. Ball, Trail 45.

25. *Lake Louise to Ross lake.*—Eight miles. Mount Niblock and Great Divide.
26. *Banff to Laggan, north side.*—Thirty-eight miles. Mounts Edith, Hole-in-the-wall, Bourgeau, Pilot, Massive, Castle, Ten Peaks, Temple, Hector, and others.
27. *Upper lakes, Mount St. Piran and Little Beehive.*—Six miles. Lakes in the Clouds,—Louise, Mirror and Agnes.
28. *Grandview trail.*—Two miles. Birds-eye view of Victoria glacier and lake Louise.
29. *Lake Louise and Victoria.*—Four miles.
30. *Saddle peak and Sheol valley.*—Six miles. Fairview, Saddle, and Temple.
31. *Paradise valley.*—Six miles. Mount Aberdeen, Horseshoe glacier, the Mitre. Pinnacle peak, Wastach pass, Eiffel peak, and mount Temple.



Unnamed Lake Recently Discovered in Red Earth Creek District Rocky Mountains Park.

32. *Giant Step falls.*—One mile from main Paradise Valley trail.
33. *Lake Annette.*—One mile from main Paradise Valley trail.
34. *Sentinel pass* (altitude 8,556 feet).—Seven miles. Between mounts Temple and Pinnacle. Larch valley, Ten peaks and Moraine lakes.
35. *Moraine Lake trail.*—Nine miles. On base of Fairview and Temple. Carriage road. Ten peaks, Bident, Quadra.
36. *Consolation lakes.*—One and one-half miles. Lake Bident and mounts Bident and Quadra.
37. *Wenkchemna valley and lakes.*—Five miles. Moraine lake, Wenkchemna lake and glacier. Ten peaks, etc.
38. *Wenkchemna pass.*—Seven miles. High trail on Temple, Pinnacle and Eiffel. Prospector's valley.

39. *Vermilion pass and Boom lake*.—Twelve miles. Summit lakes, Boom mountain and lakes, mounts Storm, Whympier and Bident.

40. *Twin lakes*.—Five miles. Copper and Storm mountains.

41. *Copper mountain*.—Four miles. Copper mine.

42. *Red Earth creek and Shadow lake*.—Ten miles. Mounts Copper, Pilot, Ball and Brett, Shadow lake and many others. Canyon.

43. *Castle mountain to Banff* (south side).—Twenty miles. Mounts Copper, Pilot, Brett, Bourgeau, Healy creek, Sheep cave, Cave and Basin.

44. *Healy creek and Summit, high trail*.—Sixteen miles. Mount Bourgeau, Window-of-the-Gods (Hole right through the mountain). Simpson summit and lakes and view of mount Assiniboine.

45. *Healy creek, Simpson pass and head of Red Earth creek*.—Sixteen miles. Several lakes.

46. *Brewster creek*.—Fourteen miles. Fatigue mountains, Brewster glacier.

47. *Douglas creek*.—Seven miles. Summit lakes, etc.

48. *Sundance pass and around Sulphur mountain*.—Twenty miles. Sundance canyon, Eau Claire lumber camps, mount Rundle, Spray canyon.

49. *Hot Springs and Observatory*.—Six miles. Middle Springs, Kidney Springs, Government swimming baths and Hot Springs, Sulphur mountain and Observatory. Carriage road to Hot Springs, balance cinder path.

50. *Around Tunnel mountain*.—Four miles. Bow falls, Hoodoos, etc. Carriage road.

51. *Spray lakes, main trail*.—Thirty miles. Mount Rundle, Three Sisters, Spray lakes. Carriage road 6 miles.

52. *Spray River falls, Bryant creek*.—Sixteen miles. Spray falls, Bryant creek, mount Assiniboine.

53. *Main Spray river*.—Twelve miles. Goat range, Eau Claire camps.

54. *East branch of Spray to Mud lakes*.—Ten miles. Mud lakes and Hogarth lakes, southern boundary of park.

55. *From Head of Kananaskis to Spray*.—Ten miles. Chain of four lakes, glacier, and fine peaks. Route along Continental Divide.

56. *Spray river, Palliser branch*.—Six miles. Cariboo lakes, Canyon, etc.

57. *South branch of Spray to Whiteman's pass*.—Six miles.

58. *Canmore to Spray trail*.—Four miles. Sulphur Springs, Whiteman's pass, Rundle, Three Sisters, Hoodoos.

59. *Kananaskis river and lakes*.—Thirty miles. Mount McDougall, Kananaskis range, Fishers range and lakes.

60. *Gap trail to Kananaskis valley*.—Ten miles. Pigeon mountain, Wind mountain.

N.B.—All mileage, except branch trails, starts from Banff or lake Louise.

A trail was started in the month of May and finished in September, at a cost of about \$1,200, from the automobile road at the south of Vermilion creek over to Healy creek, a distance of about 16 miles, and involving in its construction 87 feet

of corduroy and 2,247 feet of grading. The cost of the bridges over Healy and Red Earth creeks is estimated at \$800. All the trails in the park received the attention of the wardens during the year, and were reported to be in fair condition.

ROADS AND BRIDGES.

I give below a tabulated list of the roads in the park which are in condition for vehicular traffic, together with the mileage. During the year the whole length of the road from Kananaskis to Banff was widened and surfaced, at an approximate cost of \$20,000, while the road from Banff to Laggan was extended. The road from Canmore station to the Canmore mines was lined with a cinder footpath, and all the other roads were repaired where this was found to be necessary.

	Miles.
Kananaskis to Banff	35
Banff to Hot Springs	3
Banff to Sundance canyon	4
Banff to lumber camp on Spray river.....	8
Tunnel Mountain drive	5
Lake Minnewanka drive	9
Banff to Laggan	38
Laggan to Lake Louise	3
Lake Louise to Moraine lake	9
Bankhead road to buffalo paddock	1
Town streets	16
Loop drive	7
Canmore station to Mines	1.5
Total	<hr/> 139.5 <hr/>

THE AUTOMOBILE ROAD.

During the season we employed on an average 500 men, approximately half this total number being continuously at work on the automobile road. There were four



New Motor Road under construction, Rocky Mountains Park, Pilot Mountain in Distance.



Banff Avenue before and after being Paved with Rocmac

large gangs in all employed on this road, and the men were accommodated in well-kept and orderly camps. The road has been cut to the maximum width practically the whole length of the park, and when finished will constitute an entirely new and safe road for vehicles. The timber which had to be removed has been utilized in a number of ways, and a large number of posts have been saved for the erection of the fence enclosing the new moose pasture. All the underbrush, and any material that might have been dangerous in the way of starting forest fires, was cut and burned, and the whole right of way is now cleared and in good order, leaving surfacing, blasting, and stumping to be done at various points along the route. The work, which went on steadily all the summer and fall, was stopped about the end of November by a heavy snowfall, which was not dissipated before the real winter came, so that it was necessary to dismiss the workmen for the year.

AUTOMOBILES.

The total number of automobiles in which parties visited the park, and for which licenses were taken out, was 173, a considerable increase over the total for previous years. With the formal opening of the new road east and west, this number is expected to be very largely exceeded.

WORK IN THE TOWN OF BANFF.

A large amount of work was done in the town of Banff during the year, principally on Banff avenue, and on the roads leading to the railway station, the whole length of the streets between the station and the river bridge at the end of Banff avenue having been surfaced with rocmac.

A great improvement was also made in the appearance of Banff avenue, by the formation of an ornamental plot in the centre, which it is intended to sow with grass. The street has been divided for traffic purposes, and it is intended to set up in the centre of this plot a number of cobble stone pedestals, upon which will be erected cluster lights. This artistic improvement in the lighting of the avenue will greatly enhance the appearance of the principal thoroughfare of the town. Considerable work was also undertaken in connection with the formation and grading of new streets, the latter of which has greatly improved their accessibility and appearance.

In conjunction with the work of surfacing the roads in the town of Banff, there has also been finished a considerable mileage of new sidewalks, bordered with concrete curbs, the excellent effect of which may be noticed especially on the roads leading from the railway station to Banff avenue.

During the summer, in order to lay the dust on the town streets, they were continually sprinkled with water, and in some parts treated with oil, the result in the abatement of the dust nuisance being most gratifying. I also kept street cleaners at work during the season on Banff avenue, which, from having in the past the appearance of a village road, now attains to the dignity of a city street.

As an aid to ensuring the general health of the town, I instituted a yard-cleaning movement which was very successful, and had notices erected forbidding expectoration on the sidewalks which have been well observed. The appearance of the town in the lanes and corners, where garbage and other offensive debris is apt to collect unless carefully watched, is most satisfactory.

WATER AND SEWER WORK.

During the year there were 293 applications for water and the same number for sewer connections with our mains.

Water.

The town of Banff is fortunate in having an excellent supply of water, which is frequently analyzed, and never fails to give results pointing to uniform purity. The

low water flow shows that the available supply is sufficient for a city many times the size of Banff. The present system consists of a twelve-inch wooden gravity pipe line tapping Forty-mile creek, at an elevation of 325 feet above the main portion of the town. The size of the pipe reduces to 10 inches, is of cast-iron where it passes through the streets, and finally discharges into a 150,000 gallon wooden tank set at an elevation of 295 feet, 3.86 miles distant from the intake. Until the enlargement of the Canadian Pacific Railway Company's hotel, and the very large increase in the number of annual connections to our main, this supply was considered quite sufficient, but there is now in contemplation an enlargement of the system.

Sewer.

A large amount of work has been done during the year on sewer extension, which gave employment to a large number of men. The total extension was 16,525 feet or 3.13 miles, the particulars of which are as follows:—

Street.	From.	To	Length.
			feet.
Beaver street.....	Wolf street.....	Elk street.....	168
Beaver street.....	Elk street.....	Banff avenue.....	1,500
Elk street.....	Muskrat street.....	Squirrel street.....	1,408
Squirrel street.....	Elk street.....	Moose street.....	650
Marten street.....	" ".....	" ".....	650
Banff avenue.....	" ".....	Muskrat street.....	2,326
Muskrat street.....	Wolf street.....	Banff avenue.....	2,182
Otter street.....	" ".....	Lot 9 B. 23.....	804
Lane between Otter and Grizzly	" ".....	Grizzly street.....	1,292
Cariboo street.....	Lane between Grizzly and Otter	Otter street.....	210
Wolf street.....	" ".....	" ".....	210
Moose street.....	Muskrat street.....	Beaver street.....	340
Bear and Lynx streets.....	Buffalo street.....	Northwards.....	791
Spray avenue.....	River avenue.....	Road to Spray bridge.....	80
Spray avenue.....	" ".....	" ".....	2,236
Road to Spray bridge.....	Spray avenue.....	Glen avenue.....	678
Drain from Pavilion.....	Pavilion.....	Cave avenue.....	1,000
		Total.....	16,525

NEW BUILDINGS IN BANFF.

Splendid progress was made with building construction during the year by the Public Works Department, the Department of Marine and Fisheries in connection with the new fish hatchery, and by the general public.

The principal buildings which have been finished in the town during the year are as follows: New police barracks, new school, new Government stable, recreation pavilion at new grounds, new fire hall and offices, cage for polar bear, loading chute at Buffalo park, shelters on road to Hot Springs, houses for game wardens at Laggan, Minnewanka, and Panther creek, fish hatchery.

The new police barracks, situated next to my office on Banff avenue, while not erected by the department, are worthy of notice, as they constitute perhaps the most comfortable Royal Northwest Mounted Police barracks in the west. The building is a handsome one of red brick, and contains large office and court-room, sleeping quarters for the officers, fully equipped cell-accommodation on the ground floor, and house-keeping facilities in the basement.

The new School which was opened in the fall is situated on Banff avenue, a little to the east of the old building, and has all the conveniences for carrying on educational work in the town. The building is of brick and has a very handsome appearance.



New District to be opened up by Red Earth Creek Trail.



Mt. Assiniboine, Two miles from foot of Mountain. Trail 44.

The Government Stores building is situated immediately behind the wooden building which, for many years, did duty as the storehouse, and consists of a substantial two-story brick building on concrete foundation, with basement giving ample storage room and having the necessary facilities for the handling of the stores.

The recreation building is situated on the south bank of the Bow river at the edge of the new recreation grounds, a little west of the bridge spanning the Bow river at Banff avenue. There is a large recreation hall with the necessary administration and service rooms.

When the school trustees gave up the old school building, it was immediately taken over by the department and entirely remodelled, an additional story and bell-tower being added. In it will be housed the new fire-fighting apparatus, and space will also be found for members of the fire brigade, the staff of the resident engineer of the park, and the new telephone exchange.

The new stables which are situated at Squirrel and Elk streets, were finished early in the fall. They consist of a large brick building of pleasing design having accommodation for a large number of horses, and storage room for fodder and the like on the second floor, and also room for the proper administration of the property.

I am glad to say that we have been able to erect a number of shelters on the Hot Springs road. These will serve the double purpose of giving facilities for rest to walking parties, and shelter from the elements when unpropitious.

The chutes for loading and unloading buffalo will obviate the considerable difficulty which has previously attended the shipment of these animals.

TELEPHONE SYSTEM.

There is not much that is new to report in connection with the telephone system in the park. A very satisfactory service continues to be given, but the system has been found to be too limited for all the demands that are made upon it. Fourteen new connections were made during the year, the number being necessarily restricted on account of the switch board being filled up; but with the installation of the new exchange in the remodelled 'school' building, we shall be able to take care of all the applications for some time to come.

LOTS AND BUILDINGS.

Notwithstanding the financial stringency all over the West during the year there was a large amount of building and other work in the park, apart from the work which was undertaken by the department. We issued eighty-four building permits during the year, and the estimated value of the dwellings which these permits covered reaches the total of approximately \$110,000, exclusive of the immense sum which has been expended by the Canadian Pacific Railway Company in connection with the additions to their hotel.

We had sixty-eight applications for lots in Banff townsite during the year, which is a slight falling-off; but nevertheless, a good record for the year which has just passed. Twenty lots were taken up at Canmore, and twelve at Lake Minnewanka. These figures show a slight decrease so far as concerns Canmore, and a light increase so far as lake Minnewanka is concerned.

On July 14 and September 27, 1913, cancelled and otherwise vacant lots in the town-site of Banff were put up at auction. The sale in July, being in the height of the summer season, was largely attended, and bidding was keen for the fifty-three lots offered, while the 147 lots in the new subdivision offered in September were also fairly well taken up. In July, lots were also offered for lease in lake Minnewanka and Canmore townsites, and these, too, met with a good demand.

WINTER SPORTS.

A glance at the meteorological report will show that the climate of the park, and especially at Banff, has not been rigorous, and can compare favourably with many of the favourite European winter sport resorts. During the winter there has not been a single day upon which out-door bathing was not pleasant at the Cave and Basin and the Hot springs, and, at no time, was the cold intense enough to put even a temporary stop to out-door recreation.

The Winter Sports Club of Banff, constructed and maintained an excellent toboggan slide on Cariboo street, at rates which made its pleasures available to many hundreds during the winter. The slide was a distinct attraction for many week-end parties to Banff, and the club's periodical snowshoe tramps have invariably been well attended.

The Curling Club had four open-air rinks on the old location during the season, and their annual "bonspiel," held during the month of February, was a great success, attracting, as it did, competition from all over the province of Alberta.

Mr. Mather again prepared and maintained in excellent condition a large skating and hockey rink, which drew large crowds throughout the season, especially when hockey and broomball matches were held, besides adding to the number of week-end visitors from the neighbouring cities.

THE ZOOLOGICAL COLLECTION.

The number of animals and birds which we have at present in the zoo is fifty animals and thirty-six birds, the details in regard to which are given below. Nine birds and seven animals were added this year, the greater number of which I purchased; but I should like to convey my thanks to those who gave specimens to the "Zoo" free of charge.

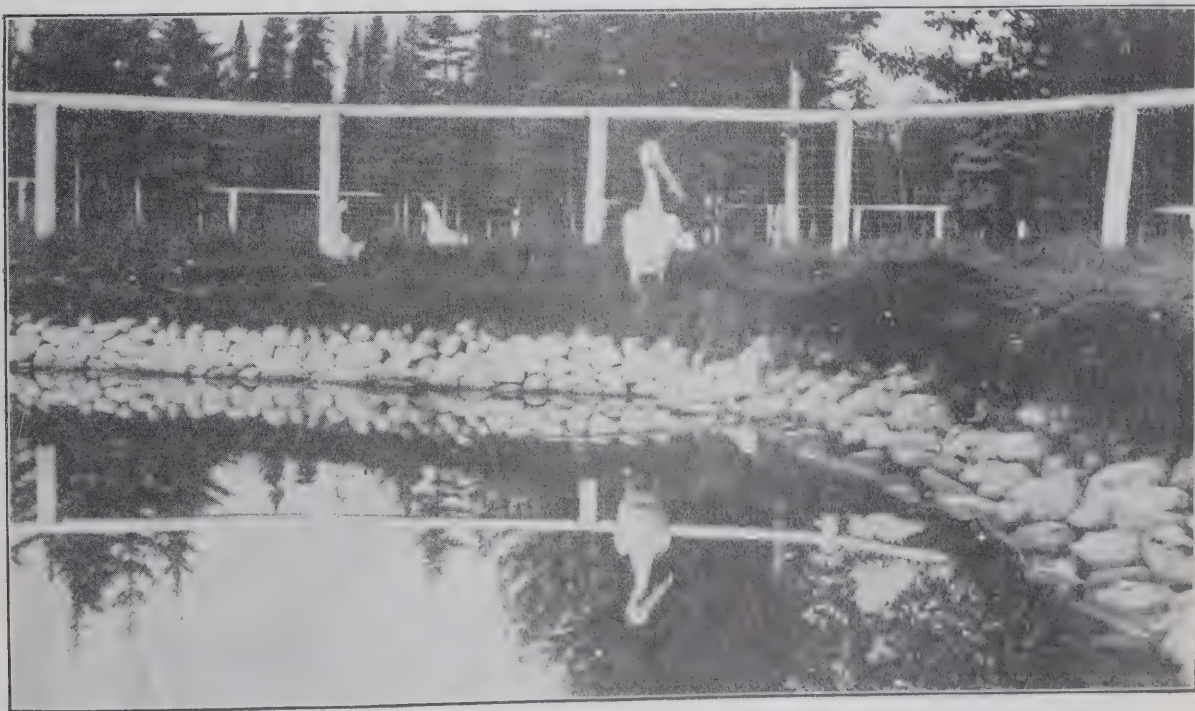


Photo by W. Sambrook.

Pelican in Banff Zoo.

Animals.—Black bears, 4; polar bear, 1; grizzly bears, 2; cinnamon bear, 1; mountain lion, 1; timber wolves, 3; coyotes, 3; lynx, 3; raccoons, 2; porcupines, 4; red foxes, 2; kit foxes, 3; badgers, 2; pine martens, 3; fox squirrels, 3; black squirrels,

2; orange squirrel, 1; white gopher, 1; mountain gopher, 4; marmots, 2; rhesus monkeys, 2; ringtail monkey, 1.

Birds.—Silver pheasants, 3; golden pheasants, 4; Lady Amherst pheasants, 2; common pheasants, 4; Reeves pheasants, 2; Canada geese, 4; Pekin ducks; golden eagles, 3; black-headed eagle, 1; hawks, 3; owls, 2; pea fowls, 2; turkey buzzards, 2.

All the inmates of the “Zoo” are in excellent health.

FREE ANIMALS.

Outside these precincts, there are in the winter months hundreds of deer. Their instinct has apparently told them of the protection afforded them in the park, and they have, in consequence, become very tame. To see them parading along the streets of Banff itself, or nosing round back doors for potato peelings or other scraps which the housewife may dole out, is evidence of their, at all events temporary, domesticity when under protection, and forms an ever appreciated source of interest to visitors.

The mountain sheep and goats on the adjacent mountain sides are also becoming exceedingly tame. It is a remarkable sight when driving along the trails to meet large flocks of these. The magnificent spectacle of a mountain ram, with his huge horns, standing on a rock within a few yards of the passer-by, provides an opportunity for the camera unknown elsewhere.

THE ANIMAL Paddock.

The statistics relating to the captive animals in the buffalo park east of the town of Banff make rather interesting reading, showing that the animals there confined are increasing in numbers, a condition which is contrary to our experience in connection with the animals in the cages at the “Zoo.”

During the month of April, 1913, two buffalo calves were born into the herd, but we had to slaughter two bulls in February, 1914, as they had injured themselves in a fight for the supremacy of the herd, and were thus unsuitable for retention as specimens. During April, one Persian sheep was born, but died soon afterwards; a fine specimen of the four-horned sheep was also born and continues to do well. A mule-deer was caught outside the pasture and added to the herd, and a Rocky Mountain goat regained its liberty in the same month.

In the month of May, two moose calves and one Rocky Mountain sheep were born, and remain in the enclosure and, on the instructions of the Commissioner of Dominion parks, one yak was shot and sent to Ottawa as a specimen.

In June, three elk and two mule deer were born and are doing well and, in July, three Angora goats, two yak, and one four-horned sheep were born, and remain inmates of the enclosure.

During the month of March, the ten female buffaloes which were in the enclosure were shipped to join the large herd at Wainwright; the intention is to replace them later on.

The animals at present in the paddock are as follows:—

	Male.	Female.
Buffalo.. . . .	17	..
Moose.. . . .	5	4
Elk	12	11
Mule deer.. . . .	7	4
White tail deer.. . . .	1	1
Persian sheep.. . . .	2	3
Angora goats.. . . .	11	6
Rocky Mountain sheep.. . . .	1	4
Rocky Mountain goat	1	1
Four-horned sheep	2	4
Yak.. . . .	3	4



Polar Bear in Banff Zoo.

FOX-FARMING.

Coincident with the great rise of the fox-farming industry in Prince Edward Island, we received one inquiry as to the facilities for the carrying on of this industry in the park. The necessary information was given, but if there was any real movement at the back of the inquiry it has not taken further shape.

FIRES.

During the year there were only two outbreaks of fire, and at both of these the members of the fire brigade and employees of the department did effective work.

In the summer months there was a small outbreak in the kitchen of the Alpine club grill, which was extinguished before damage exceeding \$200 had been done.

The serious fire of the year occurred on the morning of February 7, 1914, when the larger part of the "King Edward" hotel was destroyed. The fire broke out in the timber part of the structure on Banff avenue; but, as it was late in the morning, none of the guests were caught in their beds. It happened to be one of the coldest days of the winter, and the fire-fighting was handicapped by the hose continually freezing. In spite of the drawbacks, however, the volunteer fire brigade, aided by employees of the department, did splendid work and managed to confine the fire to one building so effectually, that the premises of the Brewster Trading Company, separated from the hotel building by an opening less than two feet wide, were hardly scorched, while the brick portion of the hotel was saved in similarly good condition.

In a town like Banff, where so many of the buildings are of wood, the fire danger is always more or less present; but, with the new apparatus which will be delivered shortly, I am confident that we shall be in a position to deal adequately with this danger.

VISITORS TO THE PARK.

Although the hotelkeepers did not call the season of 1913 an excellent one, the number of visitors as compared with previous years was well maintained, and among these visitors was a large number of distinguished persons from all over the world.

On August 2, 1913, perhaps the most prominent party of the year, consisting of members of the Empire Parliamentary Association who were travelling through Canada, arrived at Banff. The party included the following persons: The Rt. Hon. Lord Emmott and Lady Emmott; the Rt. Hon. Lord Sheffield; Mr. G. B. Stuart-Wortley, K.C., M.P.; Mr. Thos. Lough, M.P., and Mrs. Lough; Col. Sir E. Hildred Carlile, M.P., Lady Carlile, and Miss Carlile; Mr. Arthur Sherwell, M.P.; Sir Arthur Priestly, M.P.; Sir Donald Macmaster, K.C., M.P.; Mr. Hamar Greenwood, M.P., and Mrs. Greenwood; Mr. Sidney Goldman, M.P., and Hon. Mrs. Goldman; Capt. D. V. Pirie, M.P., and Miss Pirie; Col. C. E. Yate, C.S.I., C.M.G., M.P., and Mrs. Yate; Mr. Will Crooks, M.P.; Sir Stephen Collins, M.P., and Lady Collins; Mr. A. F. Bird, M.P.; Mr. A. W. Black, M.P.; Mr. Edgar Jones, M.P.; Mr. Howard d'Egville, Hon. Secretary of the United Kingdom Branch of the Empire Parliamentary Association; Mr. E. E. Mitchell, K.C., of Australia, accompanied by Mr. George Ham, of Montreal.

On arrival at Banff the party was met by Senator Loughheed, Senator J. A. Forget, Dr. Brett and myself, and driven to the Banff Springs hotel, where the members resided during their brief stay at Banff. The visitors saw all the places of interest in the town and immediate vicinity, the upper Hot springs, the Buffalo park, the higher reaches of the Bow river, the golf course, the Cave and Basin, and a section of the new automobile road. They all appeared to enjoy their stay in Banff very much, and expressed their regret that their planned itinerary did not permit of a stay longer than two days.

In the month of June, the semi-annual meeting of the Law Society of Alberta was held in Banff, combining pleasure and business. It was attended by most of the

prominent lawyers in the province. In the same month the Hon. T. W. Crothers, Dominion Minister of Labour, while travelling in the West with a party, made a short stay in the town.

In the month of July the prominent visitors from Europe and the United States included Capt. Farrar, D.S.O.; Mr. G. B. Baker, Major Eckford, W. P. Hesketh-Smith, Mr. L. F. Steele, Mr. C. S. Thompson (well known as an old-time explorer of the Rockies); Professor Fay, Dr. Chas. Walcott, of the Smithsonian Institute; Hon. R. C. Cecil, and Mr. Roger Pocock, the last named two of whom were on their way through the Rockies on horse-back. In the same month the park was visited *inter alia* by the following people from eastern Canada: Mayor Lavallée, of Montreal; Mayor Blighe, of Halifax; Mayor Herbert of Sherbrooke; Mayor Graham of London; Aldermen Lapointe, Boyd, and Poirant of Montreal; Comptroller Church of Toronto; Comptroller Duprief of Montreal; Alderman and Mrs. Desette of St. Hyacinthe; Mayor Brosseau of Sault du Recollet; Ald. Kyle of Longueuil; Mr. Bragg of St. Lambert, Editor of the Canadian Municipal Journal; Rt. Rev. Bishop Scollard of Sault Ste. Marie; and Bishop O'Brien of Peterboro.

During August, the visitors to the park included, besides the British Parliamentary party, already mentioned, Hon. Robert Rogers, Minister of Public Works, and party; Mr. J. B. Hunter, Deputy Minister of Public Works; Professor Fulong of Cornell University; Hon. W. J. Roche, Minister of the Interior; and, in September, Dr. Wu Lien-teh, M.D., (Camb.), Physician to the Chinese Foreign Office, was one of our visitors.

The picnic parties during the 1913 season were also numerous, as the following statement shows. This statement, however, cannot be taken as complete, as there were large numbers of semi-private parties averaging perhaps fifty persons, of which an accurate record was practically impossible. I would draw particular attention to a highly successful trip, which was run from Calgary during the week-end beginning February 28, 1914. The special train was run under the auspices of the Department of Natural Resources (C.P.R.) Athletic club, the Calgary "Vics," the Calgary "Centrals," and the ladies "Crescent" Hockey team. A total of 210 people was carried on the train, and all joined in saying it was one of the finest excursions ever held from Calgary. This, I believe, is the first special train ever run into Banff during the winter months. The party spent some hours at a hockey carnival at Canmore, afterwards coming to Banff, and found that the Park in the winter season was as delightful as during the summer. There was excellent skating, tobogganing, snowshoeing and sleighing, and both of the open-air baths were largely patronized. Late in the season though it was, there was a noticeable increase in the subsequent number of small week-end parties.

EXCURSIONS.

Date.	Where from.	Number.
May 8.....	Soo Railway Conductors.....	100
" 24.....	Calgary I.O.O.F.....	2,400
June 1.....	Calgary Masons.....	200
" 5.....	" I.O.O.F.....	1,500
" 5.....	Semi-annual meeting Alberta Law Society.....	100
" 14.....	Banff Overseas Club.....	200
" 17.....	Canadian Press Women's Association.....	250
" 20.....	Neilson's Furniture Company, Calgary.....	200
" 24.....	Calgary Methodists.....	1,200
July 1.....	Rice's Circus.....	250
" 8.....	Calgary Salvation Army.....	565
" 9.....	" " ".....	1,100
" 15.....	Exshaw Sunday School.....	100
" 16.....	Moore Employees, Calgary.....	120
" 17.....	Grace Presbyterian Church, Calgary.....	650
" 17.....	Indian Day.....	3,000
" 18.....	Women's Temperance Union, Calgary.....	200
" 19.....	Indian Day.....	3,000
" 22.....	Hudsons Bay Store, Calgary.....	750
" 22.....	High River School Picnic.....	600
" 30.....	Knight Templars, Calgary.....	300
" 31.....	Messrs. Fish, McNeill & Martin's Employees, Calgary.....	400
" 31.....	Carstairs Methodist Sunday School.....	750
Aug. 2.....	British Parliamentary Party.....	50
" 20.....	Geological International Congress.....	110
" 26.....	Calgary Methodist Choir.....	115
Sept. 1.....	Calgary Electricians' Union.....	1,500
" 1.....	Trip from Calgary.....	700
" 5.....	Calgary Pro-Cathedral Choir.....	70

I have the honour to be, sir,

Your obedient servant,

S. J. CLARKE,

Superintendent Rocky Mountains Park.

APPENDIX No. 2a.

REPORT OF THE CURATOR OF BANFF.

BANFF, ALBERTA, April 1, 1914.

SIR,—I have the honour to submit herewith the ninth annual report of the Rocky Mountains Park museum for the year ending March 31, 1914.

During the spring and early summer some entomological and botanical material was collected around Banff, and part of previous collections arranged. I also renewed the open exhibit of wild flowers and kept a list of the arrival of birds, etc. Later, a case of local moths and butterflies was made up, being the start of an open exhibit of insects.

SIMPSON PASS AND SUMMIT.

On July 4, 1913, acting on instructions from the Commissioner of Dominion Parks, I accompanied Mr. A. Knechtel, Chief Forester of Dominion Parks, Ottawa, on a trip to Simpson summit, in order to make arrangements for collecting a quantity of some suitable flowering plants for a small pamphlet to be issued in 1914.



Royal Northwest Mounted Police, Banff.

We concluded that the red heather, which grows so abundantly on this summit, would be most suitable for the purpose required. The heathers were then only commencing to flower and as we had pressing material and outfit to procure, we returned to Banff.

On July 14, we again started for the summit with our outfit, setting to work to make up many pressing frames after our arrival.

On July 17, we commenced collecting the red heather, which was then not much more than beginning to flower in any quantity, at the same time collecting some other conspicuous flowering plants in order to find which would make good dried specimens. By August 2, good specimens of the red heather were getting scarce, a deeper coloured form (smaller plants and flowers) coming out more abundantly.



Snow Lilies (*Erythronium Grandiflorum*), Rocky Mountains Park.

Mr. Knechtel had to leave about August 13 to attend to other duties; but I remained on the summit till September 6, during which time I was occupied in changing drying heather, roaming about more and collecting other flowering plants, mosses, lichens, hepaticas, grasses, etc., and insects. In this work I climbed a little, and got much material.

The summit (6,670 feet-length of pass 70 miles) was an inspiring sight by the beginning of July:—Countless numbers of the white western anemone (*Pulsatilla occidentalis*); the beautiful yellow snow lily (*Erythronium grandiflorum* Pursh); the white globe flower (*trollius laxus* Salisb) and the marsh caltha (*Calltha leptosepala*), covered the summit and mountain valleys amid some small but very beautiful clear, deep lakes, which, however, contained no fish; while a noble pile of rock (Monarch mountain) stood 9,400 feet above. Down this pile rocks were always falling. On all sides were hills with open timber, mostly mountain larch (*Larix Lyalli* Parl.) and the western balsam fir (*Abies Lasiocarpa* (Hook.) Nutt, with some Engelmann's spruce (*Picea Engelmanni* Engelm).

Later on many other beautiful flowers appeared in abundance. With the white, and pink heather, white cassiope, the mountain buttercup, yellow violets, spring beauties, pink mountain laurel, valerians, yellow and purple honeysuckles, white mountain everlastings, yellow senecios, golden rods, potentillas and white grass of Parnassus, and the many variously coloured and very beautiful mountain Indian paint brushes (*Castilleja*), the colour scene was ever changing; most of the wild flowers, so beautiful and so very hardy, were temporarily drooping before the fury of alpine snowstorms and frost, and recovering to straighten their drooping forms and smile again as if nothing had happened. These plants are, withal, very tender, wilting almost at the touch of man; especially the hardy spring beauty which droops very quickly after being plucked, only reviving when doused in hot water.

In sheltered spots plants were in flower and flowered well on into September.

FLOWERING PLANTS GROWING ON THE SUMMIT.

- Anemone Drummondii* Wats.—Drummond's anemone; not common.
Anemone globosa Nutt.—Cutleaved anemone; not common.
Anemone parviflora Michx.—Small-flowered anemone; not common.
Pulsatilla occidentalis (Wats.) Freyn.—Western pasque flower; abundant; some seeding July 15.
Aquilegia flavescens Wats.—Yellow columbine; not common; in flower July 23.
Caltha rotundifolia (Huth.) Greene.—Marsh Caltha; abundant.
Ranunculus alpeophilus A. Nels.—Mountain buttercup; abundant.
Thalictrum occidentale Gray.—Western meadow rue; common.
Trollius laxus Salisb.—Globe flower; abundant; seed heads August 23.
Papaver alpinum L.—Arctic poppy; rare.
Cardamine umbellata Greene.—Bitter cress; not common; in seed August 22.
Viola mistassinica Greene.—White-flowered violet; not common; in flower July 19.
Viola orbiculata Geyer.—Yellow violet; abundant.
Lychnis apetala L.—Nodding Lychnis; tolerably common.
Draba saximontana A. Nels.—Alpine whitlow grass; tolerably common.
Arabis Lyalli Wats.—Lyll's rock-cress; common.
Claytonia lanceolata Pursh.—Lanceolate-leaved spring beauty; abundant.
Aragallus podocarpus (Gray) A. Nels.—Inflated oxytrope; tolerably common high up among the shingle; in seed August 24.
Dryas octopetala L.—White-flowered wood avens; tolerably common.
Fragaria ovalis glauca (Wats.) A. Nels.—Glaucous strawberry; berries ripe August 25.
Potentilla nivea L.—Snowy cinquefoil.
Potentilla decurrens (Wats.) Rydb.—Common; in flower July 21.
Sibbaldia procumbens L.—Sibbaldia; abundant; in seed August 21.
Mitella pentandra Hook.—Mountain Bishop's mitre; common; flowering July 17.
Parnassia fimbriata Banks.—Fimbriated parnassus; abundant; in flower July 23
Parnassia kotzebue C. & S.—Kotzebue's grass of Parnassus; rare.
Saxifraga austromontana (Wiegand.)—Spotted saxifrage; abundant; flowering till September.
Saxifraga rhomboidea Greene.—Clustered Alpine saxifrage; tolerably common; in flower July 20.
Saxifraga Lyalli Engler.—Lyll's saxifrage; tolerably common; in flower July 20.
Saxifraga oregonensis (Raf.) A. Nels.—Ascending saxifrage; tolerably common.
Saxifraga cernua L.—Nodding or drooping bulbous saxifrage; rare; seeding August 21.
Saxifraga oppositifolia L.—Purple or mountain saxifrage; common seeding August 20.
Sedum stenopetalum Pursh.—Narrow-petalled stonecrop; common.
Epilobium alpinum L.—Alpine willow herb; common; in flower July 15.
Chamaenerion latifolium L.—Sweet broad-leaved willow herb; seeding August 9; not common.
Valeriana acutiloba Rydb.—Widow or swamp valerian; abundant; in flower July 17.
Achillea millefolium L.—Mountain yarrow; fairly common.
Antennaria lanata Greene.—Woolly antenaria or everlasting; abundant; flowering end of August.
Antennaria Macounii—Macoun's everlasting; common.
Antennaria racemosa Hook.—Reacemore everlasting; tolerably common; flowering July 23.
Tonestis Lyalli (Grey) A. Nels.—Lyll's aplopappus; abundant; by July 25, in good flower.
Aplopappus brandegii Gray.—Golden erigeron; abundant; by July 25 in good flower.
Arnica fulgens Pursh.—Alpine Arnica; common, first flowering July 19 and to end of August.
Arnica subplumosa Greene.—Tomentose arnica; common.
Hieracium gracile Hook.—Slender hawkweed; tolerably common; in flower July 20.
Erigeron caespitosus Nutt.—Tufted erigeron; common.
Erigeron compositus Pursh.—Composite erigeron; fairly common.
Erigeron compositus Pursh. var. *glabrata*.—Macoun's smooth erigeron; common; commencing to flower July 19 and to end of August.
Erigeron uniflorus L.—One-flowered erigeron; common.
Erigeron acris debilis Gray.—Common.
Petasites frigida Fries.—Arctic coltsfoot; common; over by August 24.
Saussurea alpina D. C. var. *Ledebouri* Gray.—Dense-flowered saussurea; in flower to end of August; fairly common.

Senecio triangularis Hook.—Triangular-leaved groundsel; abundant; flowering till September.
Senecio altus Rydb.—Black-tipped groundsel; fairly common.
Senecio discoideus (Hook.) Brit.—Discoid erigeron; fairly common; commencing to flower July 28, commencing to seed August 14.
Solidago corymbosa Nutt.—Northern goldenrod; common.
Taraxacum dumetorum Greene.—Arctic dandelion; rare.
Troximon aurantiacum Hook.—Marigold agoseris; tolerably common; in flower August 20.
Troximon glaucum Nutt.—Glaucous agoseris; tolerably common.
Phyllodoce empetrifolia (Smith) Don.—Red heather; abundant; July to August.
Phyllodoce glanduliflora (Hook.) Coville—White heather; abundant; July to August.
Phyllodoce glanduliflora intermedia (Hook.) A. Nels.—Pink heather; common July to August.
Cassiope mertensiana (Bong.) Don.—Cassiope or white heath; abundant July to August.
Kalmia polifolia Wang.—Pale or swamp laurel; common; in flower July 15, seeding August 14.
Pyrola minor L.—Lesser wintergreen; rare.
Vaccinium oreophyllum Rydb.—Whortleberry; abundant.
Vaccinium membranaceum Dougl.—Bilberry.
Gentiana acuta Hook.—Northern gentian; fairly common; in flower August 20.
Gentiana amarella L. var *acuta* (Michx.) Herder.—Bluish gentian; in flower July 1.
Gentiana propinqua Richards.—Four-partied gentian; fairly common; in flower August 20.
Menyanthes trifoliata Buckbean.—Not common; flowering in August.
Myosotis alpestris L.—Mountain forget-me-not; not common.
Castilleja miniata Dougl.—Alpine Indian paint-brush; common; in flower July 15 till September.
Castilleja pallida Kunth.—Pallid Indian paint-brush; in flower July 15.
Pedicularis bracteosa Benth.—Bracted pedicularis; common.
Pedicularis contorta Benth.—Contorted pedicularis; fairly common; seeding August 9.
Penstemon Mensiesii Hook.—Menzies beard tongue; fairly common; seeding August 9.
Veronica alpina L.—Alpine speedwell; abundant; in flower July 15.
Erythronium parviflorum (Wats.) L. N. Good—Snow lily; abundant; June to August; seeding in August.
Stenanthium occidentale Gray.—Not common; western stenanthium.
Veratrum viride Ait.—Wild hellebore; fairly common; in flower August 5.
Zygadenus elegans Pursh.—Glaucous zygadenus; fairly common.
Oxyria digyna (L.) Camptdera—Mountain sorrel; common.
Rumex acetosa L.—Sorrel sour-dock; common.

Grasses.

Poa alpina L.—Alpine spear-grass; common.
Phleum alpinum L.—Alpine phleum grass; common.
Panicum (species)—Common.
Eriophorum (species)—Cotton grass; common.
Carex (species)—Abundant.
Equisetums—Not common.
Juncus—Common.

Ferns (Few).

Filix fragilis (L.) Underw.—Fairly common.
Aspidium spinulosum (O. F. Miller) Sw.—Fairly common.
Botrychium (species)—Fairly common.

Mosses (Many).

Spagnums, *Polytrichums*, etc., etc.
Hepaticae (Liverworts), Lichens—Common.

Fungi (Few).

Many plants common about Banff are not found here.

Shrubs and Trees.

Shepherdia canadensis (L.) Nutt.—Canadian buffalo berry; rare.
Dasiphora fruticosa (L.) Rydb.—Shrubby cinquefoil; rare.
Ribes parvulum (Gray) Rydb.—Swamp gooseberry; fairly common.
Salix Brownii Bebb var. *petraea* Bebb.—Robert Brown's rock willow; common.
Salix petraea Rydb.—Alpine rock-willow; common.
Salix nivalis Hook.—Snow willow; common.
Salix Barrattiana Hook.—Barratt's willow; common.
Salix vestita Pursh.—Hairy trees willow; common.
Larix Lyalli Parl.—Mountain larch; abundant.
Abies lasiocarpa (Hook) Nutt.—Sub-alpine balsam fir; common.
Picea Engelmannii (Parry) Engelm.—Engelmann's spruce; common.

THE TRAIL.

Flowering Plants.

. Many of the summit plants reach lower levels. The snow lily (*erythronium grandiflorum*) is found within 9 miles of Banff.

The more noticeable plants on the trail from Banff to the summit (not including those of the summit):—

Heart-leaved arnica—*Arnica cordifolia* Hook.
 Silvery groundsel—*Senecio canus* Hook.
 Glaucous agoseris—*Troximon glaucum* Nutt.
 Glaucous zygadenus—*Zygadenus elegans* Pursh.
 Mountain everlasting—*Antennaria dioica* (L.) Gaertn.
 Bunchberry—*Cornus canadensis* L.
 Northern twin flower—*Linnea americana* Forbes.
 Gaillardia—*Gaillardia aristata* Pursh.
 Broad-leaved willow herb—*Chaemanerion latifolium* L.
 Drummond's yellow wood avens—*Dryas Drummondii* Richards.
 Bishop's mitre—*Mitella nuda* L.
 Indian paint-brush—*Castilleja pallida* Kunth. var *Septentrionalis* Gray.
 White-flowered hedsarum—*Hedysarum albiflorum* Macoun.
 Round-leaved pyrola—*Pyrola americana* Sweet.
 Round-leaved orchis—*Habenaria orbiculata* (Pursh.) Torr.



White Heath (*Cassiope Mertensiana*), Rocky Mountains Park.

White-leaved wintergreen—*Pyrola uliginosa* Torr.
 One-flowered wintergreen—*Moneses uniflora* (L.) Gray.
 Canada violet—*Viola canadensis* L.
 Purple violet—*Viola adunca* Smith.
 Richardson's cranesbill—*Geranium Richardsonii* F. & M.
 Glaucous strawberry—*Fragaria ovalis glauca* (Wats.) A. Nels.
 Rocky Mountain clematis—*Clematis occidentalis* Homem.
 Serrated or one-sided wintergreen—*Pyrola secunda* (L.) Michx.
 Cow parsnip—*Heracleum lanatum* Michx.
 Red baneberry—*Actaea rubra* (Ait.) Willd.

Western stenanthium—*Stenanthella occidentalis* (A. Gray) Rydb.
 Orange lily—*Lilium montanum* A. Nels.
 Northern Goldenrod—*Solidago corymbosa* Nutt.
 Bluebell or harebell—*Campanula rotundifolia* L.

Shrubs on Trail—from Banff to summit.

Canadian buffalo berry—*Shepherdia canadensis* (L.) Nutt. (both red and yellow berries).
 Prickly rose—*Rosa Sayi* Schwein.
 Macoun's rose—*Rosa Woodsii* Lindl.
 Labrador tea—*Ledum groenlandicum* Oeder.
 Involucrated fly honeysuckle—*Lonicera involucrata* Banks.
 Shrubby five-finger—*Dasiophora fruticosa* (L.) Rydb.
 Glandula or shrub birch—*Betula glandulosa* Michx.
 Common alder—*Alnus incana* (L.) Willd.
 Barratt's willow—*Salix Tweedyi* (Bebb.) Ball.
 Hairy willow—*Salix rostrata* Richards.
 Glaucous willow etc.—*Salix monticola* Bebb.
 Swamp gooseberry—*Ribes lacustre* (Pursh.) Poir.
 June berry—*Amelanchier spicata* (Lam.) C. Koch.
 Smooth menziesia—*Menziesia ferruginea* Smith.
 Mountain Labrador tea—*Ledum glandulosum* Nutt.
 White-flowered rhododendron—*Azaleastrum albiflorum* (Hook.) Rydb.

Of the bushes the following are abundant: Willows, scrub birch and smooth Menziesia.

Trees on Trail.

Aspen poplar—*Populus tremuloides* Michx.
 Balsam poplar—*Populus balsamifera* L.
 Lodgepole pine—*Pinus murrayana* Oreg. Com.
 White spruce—*Picea canadensis* (Mill) B.S.P.
 Douglas fir—*Pseudotsuga mucronata* (Raf.) Sudw.
 Engelmann's spruce—*Picea Engelmannii* (Parry) Engelm.
 Sub-alpine fir—*Abies lasiocarpa* (Hook.) Nutt.
 Lyall's larch—*Larix Lyallii* (Hook.) Nutt.

INSECT LIFE ON SUMMIT.

Insect life, outside mosquitoes, horseflies and a few other flies, was rather scarce. The material I collected has not all been gone over, but it includes:—

March flies (*bibionidae*) tolerably common at snow on mountains.
 Flower flies; common.
 Bee flies; rare.
 Snipe flies (*Leptidae*); common.
 Allied house flies; common.
 Crane flies (*Tipulidae*) or more new species; tolerably common.
 Caddis flies; perhaps a new species or so; common.
 Bumble bees; very few about.
 Horn tails (*Tremex*.)
 Long-horned beetle (*monshammux*, Sp.) uncommon.
 Click beetles (*Corymbites*, Sp.); uncommon.
 Small water-beetle species; tolerably common.
 Butterflies; quite rare.
 Moths; rare. I only saw a *chionabas* and an *anthocaris*.
 Dragon flies; very scarce.
 Grasshoppers; very scarce.
 House flies (*musca domestica*) about 100. Appeared late in August.

BIRDS ON SUMMIT.

White-tailed ptarmigan with nine young chicks, seen July 17. Before seeing the chicks I hunted closely all over a 25-yard square or so, finding no trace of a chick. When about to leave, the mother bird called very faintly, when, one by one, the chicks appeared from all about me, and close at my feet. I must have stepped on some of them, but the depressions into which they could crouch and the soft ground did no apparent injury. These chicks were not long hatched, and were about half grown on August 9 (when seen again) and able to fly. On August 22 they were about three-

fourths grown. In all cases the young birds had no apparent fear of man. Adult birds were not uncommon.

Yellow-leg plover.—Only one seen.
 American bittern.—Heard several times.
 Swainson's hawk.—Flying young.
 Hawk owl, with young in nest.
 Richardson's owl.—Uncommon.
 Grinnel's water thrush.—Tolerably common.
 Rusty-backed thrush.
 Western robin.—Rare.
 Redpolls.—Not uncommon (in flocks.)
 Juncos.—Only few seen.
 American crossbills.—Common (in flocks.)



Hoary Marmot at Nakimu Caves.

Photo by Deutschman.

American pipit.—Not often seen.
 Flycatchers.—Tolerably common.
 Warblers.—Few.
 Humming bird (rufous-backed).—Often heard menacingly about our camp (nest near) seen as late as August 23 and perhaps later on, passing through some snowstorms and frost.
 Gray Canada jay.—One pair.

MAMMALS SEEN ON SUMMIT.

Hoary marmot.—*Arctomys caligatus* (Lsch.)
 Yellow-footed marmot.—*Arctomys flaviventer*.
 Parry's marmot.—*Spermophila Parryi*. All these marmots were very numerous, their whistling being continuous through the day.
 Porcupine (yellow-haired).—*Erethizon epixanthus*.
 Porcupine (black-haired).—*Erethizon dorsatus* (Linn.) The porcupine were very numerous and were often seen digging up the bulbous roots of the western pasque flower (*Pulsatilla occidentalis*) and the nutlet of the spring beauty (*Claytonia lenceolata*.) They also had a habit of eating up any wooden boxes left out over night.
 Western chipmunk or Western Missouri chipmunk (*Tamias Quadrivittatus*.)—One of these had completely lost its tail in a trap, but was as lively as ever, resembling a young chick.
 Different Species of Mice.
 Pine marten (*Mustela americana* (Turton).)
 Snowshoe rabbit. (*Lepus americanus*, Lrxl.)

Pika rock-rabbit (*Ochotona princeps*, Richardson.)—Common amongst loose rock on mountains. Deer species.

Black bear (*ursus americanus*) Pall.—Seen about camp.

Grizzly bear (*ursus horribilis*, Ord.)—One seen on August 31. The signs of grizzly bear were noticeable by the large excavations made in digging up gophers, etc. (Parry's marmot).

Rocky Mountain goat (*orcarnos montanus*, Ord.)—Not uncommon. I unintentionally blocked the way to water of one coming down Monarch mountain. It was within 30 feet of me when, startled by his whiff, I looked up, and "Billy" commenced in rage to stamp his feet repeatedly, eventually running up the steep precipitous face of the mountain, letting out a whiff now and again till he reached the top in an incredibly short time.

WINTER.

I have been informed that snow first remains on the ground on the summit in September, deepening from that on to 7 or 8 feet where drifting. Heavy snowstorms occur during the winter, and the snow remaining loose, makes very heavy snowshoeing. The small lakes really do not freeze much, the deep snow protecting them and they are spongy. Frost penetrates the ground very little for the same reason. There is a greater amount of sunlight in the day than at lower levels, so that the range of temperature is no doubt much less than in the valleys. Some "chinook" winds occur, but the snow remains in deep rifts on the summit until some time in July. Healy's creek freezes over in October and remains frozen until the end of May. One lake at the base of a mountain west of our camp (in a shady place) was still frozen over on July 5 when we visited it.

After my return to Banff on September 6, I met Mr. Harlan I. Smith, Archaeologist of the department, who afterwards was instructed to make improvements in the arrangement of the specimens in the museum. It was decided in future to confine the museum to Rocky Mountains Park material. Mr. Smith, who has had much to do with large museums in the United States, set to work and made many decided and much required changes. We now have a good plan of how the museum should really be carried on. The buffalo were grouped, Rocky Mountain sheep and Rocky Mountain goat grouped; the animal heads were better arranged and the birds were brought from the upper to the ground floor, the exhibits on the latter now consisting of birds' eggs, mammals, fish, reptiles, insects. Painted signs have been placed over the different groups, while there are also printed and framed labels giving descriptions of some of exhibits, with catalogues, etc., for each main exhibit. The cases, labels, etc., have also all been stained the same colour as the interior of the building, and the whole effect is one of pleasing harmony.

The upper floor was similarly rearranged and contains the Indian collections (loaned), cabinets of insects, botanical collection, forestry, minerals, rocks, fossils, and formations, framed maps and large photographs; while, in a corner on the way upstairs, are shown weather maps, cloud pictures and the like. In the work of rearrangement the cases were all made about the same size so that they could be more easily moved or changed at any future time.

Some new cases have been made as follows, with as much glass space as possible.

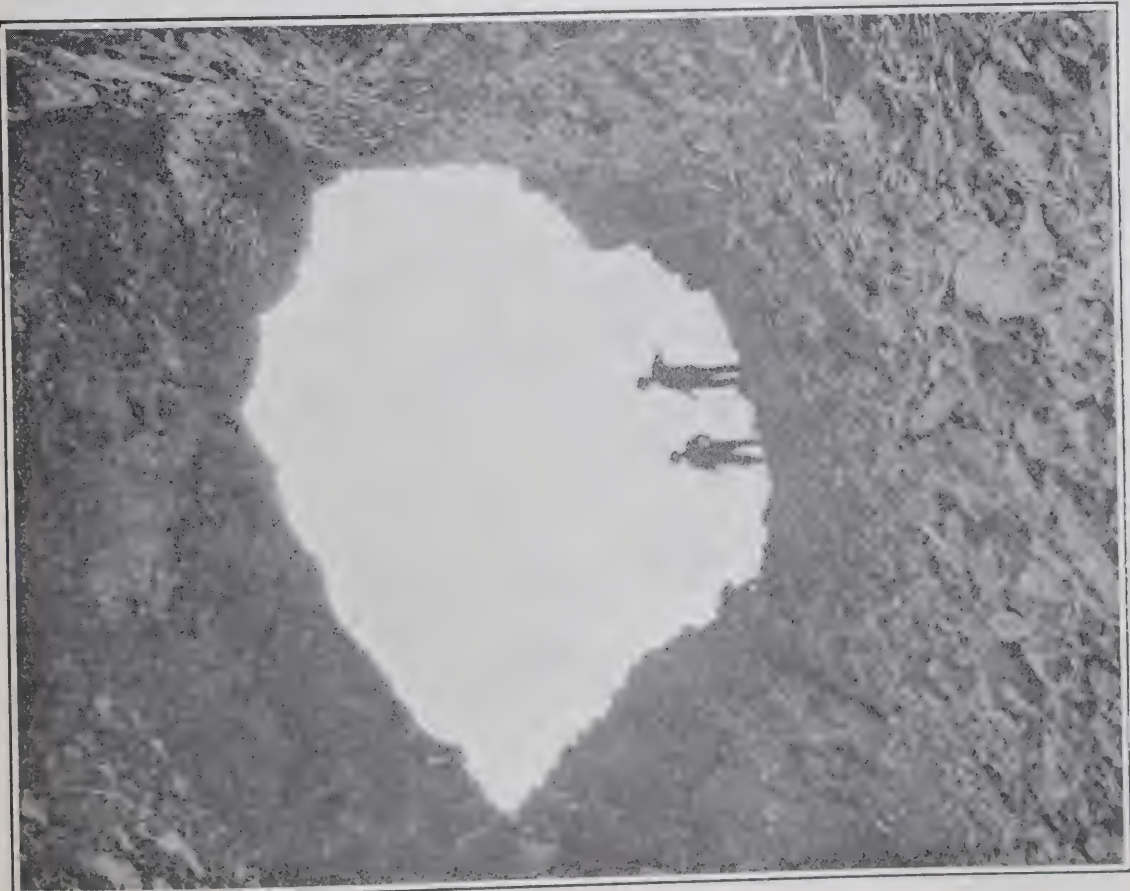
A many-shelved case for birds, one for bats, another for other mammals; a long case for mosses, lichens, etc., hepatica and fungi, and a cupboard-stand for fish-case. A much needed extra cabinet for plants was added; shelves were altered and added to cases as required, and many ideas were thrown out which will be very useful for the future; but much remains to be done to get the collection in order for the coming season. Some exhibits are, even now, rather cramped for room, and it will be necessary to have more floor-space before long.

I put in a case, by themselves, some birds which, although not at present known to be in the park may, later on, be found in this region.

I would suggest the keeping of the Musk Oxen in the Museum to one side by themselves, or in another room, as many visitors often wish to see these northern animals that once roamed over a larger area of North America than at present.



Photo by C. H. Mitchell.
Climbing Mt. Oderay, Alpine Club Camp, 1913.



Window of the Gods, Trail 44. Rocky Mountains Park.

I would strongly recommend the gradual grouping of all animals and birds with natural surroundings. This would require more room, but would be a very decided improvement, and, while everything else in the Rocky Mountains park is going ahead. I do not think or feel that the Museum should be left behind. A good taxidermist, who could do grouping with natural surroundings, and make cases for the same (which need not be expensive), should be employed, and from what I know could be done in this line, I am sure there would be enough work for a taxidermist to do for years to come. His work would include making casts of reptiles and fish, mounting skeletons of animals, birds, etc. I could also make much better progress if I were allowed the assistance of a stenographer, who could arrange all my office material, even if only temporarily employed.

I think it would be well if I were allowed during the coming summer, to visit other parts of the park in order to collect plants, insects, birds, mammals and the like for the museum, so as to become well informed in time as to what is to be found in the park, and, eventually, to compile a complete catalogue of the fauna and flora, etc., of the Rocky Mountains park. 'I might also suggest the idea—started last year—of having experts in the different divisional subjects of our museum exhibit examine the collections, and keep them thoroughly reliable and up-to-date, and also start collections of fungi, etc., to be continued afterwards, from time to time, by myself. I have much material on hand, both from last summer's work and from previous years, mostly of plants and insects, which I hope to be able to go over and arrange in time.

Dr. Allen, of Edmonton University, and Mr. L. D. Burling, of the Geological Survey, Ottawa, went over the palaeontological, mineral and rock collection, arranged the specimens, and named them as far as possible.

A descriptive pamphlet of all that pertains to Sulphur mountain, including notes on animals, birds, insects, trees, bushes and other plants, with weather statistics, etc., was completed and sent in to be printed. This work took up considerable time in the fall and early winter.

A catalogue of all the plants in the Museum collection found in the Rocky Mountains park, with data of locality and nature of *habitat*, when collected and by whom, with remarks, is now being prepared. Mr. Harlan Smith corresponded frequently with me on matters connected with a pamphlet he is getting up on the museum, and correspondence with others on museum matters was also attended to.

I have received much help and encouragement during the past year in the work of improving the museum, and hope that the Rocky Mountains park museum will, in time, be the best of its kind in Canada.

I acknowledge kindly assistance in naming material collected from Dr. L. O. Howard, Chief Entomologist of the Bureau of Entomology, Department of Agriculture, Washington, D.C., U.S.A.; to Mr. Arthur Gibson, Chief Assistant Entomologist of the Experimental Farm, Ottawa, and others.

I may say that we have in the museum material that is rare, and, in years to come, will be more so, and the museum collection is, altogether, a good asset, and should be housed in a fireproof building.

The following specimens have been added to the museum during the past year, not including plants and insects:

One Meadow Vole, female, collected by myself.

One Pine marten, male, in prime dark fur, from "Zoo." Well mounted; killed, because diseased.

One Pine marten, female, is being mounted; purchased.

One large timber wolf head; purchased.

Two Albinos of Richardson's ground squirrel; purchased.

One long-tailed shrew mouse, dark winter fur; collected by self.

One Canada Lynx, collected by William Peyto, game warden, very naturally mounted.

One Rocky Mountain sheep, now being mounted; collected by chief game and fire warden, H. E. Sibbald.

Three Western Grebe, mounted in different attitudes; collected by self.

Two American bittern, mounted in different attitudes.

Finé specimen of bald-headed eagle; purchased.

One Richardson's owl, presented by William Fyfe, game guardian.

One Swainson's hawk, a fine young specimen; collected by William Peyto, game guardian.

Two White-tailed ptarmigan, collected by Louis Mumford, game guardian.

One glass case of ptarmigan in winter plumage (white), amid natural surroundings; purchased.

Four Red-polls, three male and one female, mounted on branches; collected by self.

Two swallows nests, presented by William Fyfe, Banff.

A specimen of ancient cherry tree oozing from White Man's Pass, presented by T. B. Williams, M. Sc., Canmore.

* Fossils, several species of *Bryozoa*, etc., perhaps a new species or so from Cascade mountain, collected by self.

Fossil coral from Mount Aylmer Canyon, Lake Minnewanka, collected by self.

Other fossils not yet classified, were collected and presented by J. W. Hill, storekeeper, Banff.

Iron stone concretion from Kananaskis Pass, presented by S. C. Vick, (from black jurassic shales).

Fossil coral from near Laggan, presented by Captain Gray.

A large core of rock taken from borings at the Banff Springs hotel, while preparing plunger holes for elevators. Specimen taken from one hundred and fifty feet below surface, shows different seams of rock. Presented by Mr. C. V. Gomez, superintendent of construction.

A good specimen of part of a large petrified tree (deciduous) from near Lake Minnewanka; presented by E. J. Ballard.

Photograph of Mastodon's tusk which was found in excavations being made for the Kananaskis Falls dam, presented by Mr. H. S. Johnston, engineer-in-charge.

A large fossil fish presented by William Peyto, fire and game guardian. A new species. (This is now in the hands of the vertebrate palaeontologist at Ottawa for identification and will be returned later on.)

A flock of prairie chickens were seen about Banff all winter.

The Museum visitors' list and meteorological weather reports are appended.

I have the honour to be, sir,

Your obedient servant,

N. B. SANSON,

Curator, Government Museum.



Upper Kananaskis Lake.



Spray River Valley, Rocky Mountains Park.

APPENDIX No. 2b.

ANALYSIS OF NATIONALITIES OF VISITORS TO ROCKY MOUNTAINS
PARK.

NUMBER OF VISITORS AT THE MUSEUM from April 1, 1913, to March 31, 1914.

Canada.. . . .	10,010
United States.. . . .	2,997
England.. . . .	754
Ireland.. . . .	58
Scotland.. . . .	292
Australia.. . . .	102
Germany.. . . .	29
Denmark.. . . .	5
Japan.. . . .	10
Holland.. . . .	11
India.. . . .	17
France.. . . .	30
Norway and Sweden.. . . .	17
South Africa.. . . .	16
New Zealand.. . . .	38
Peru.. . . .	1
East Indies.. . . .	1
Russia.. . . .	2
Italy.. . . .	14
Cuba.. . . .	2
Hawaii.. . . .	10
Switzerland.. . . .	5
China.. . . .	13
Wales.. . . .	4
Jamaica.. . . .	1
Austria.. . . .	9
Bermuda.. . . .	5
Mexico.. . . .	1
Spain.. . . .	1
Egypt.. . . .	1
Total.. . . .	14,458

VISITORS AT THE CAVE AND BASIN.

Canada.. . . .	21,610
United States.. . . .	711
England.. . . .	156
Scotland.. . . .	51
Ireland.. . . .	17
Australia.. . . .	12
France.. . . .	4

Germany.. . . .	15
New Zealand.. . . .	1
Norway and Sweden.. . . .	2
South Africa.. . . .	13
Denmark.. . . .	1
Switzerland.. . . .	2
Wales.. . . .	2
<hr/>	
Total.. . . .	22,597

VISITORS AT THE UPPER HOT SPRINGS.

Canada.. . . .	9,492
England.. . . .	613
Scotland.. . . .	382
Ireland.. . . .	59
Australia.. . . .	81
New Zealand.. . . .	70
New South Wales.. . . .	63
Queensland.. . . .	21
South Africa.. . . .	32
India.. . . .	55
Ceylon.. . . .	14
Samoa.. . . .	3
Honolulu.. . . .	4
Fiji Islands.. . . .	2
United States.. . . .	12,102
Argentine Republic.. . . .	22
China.. . . .	34
Japan.. . . .	29
France.. . . .	41
Germany.. . . .	39
Sweden.. . . .	38
Switzerland.. . . .	41
Norway.. . . .	25
Austria.. . . .	7
Italy.. . . .	13
<hr/>	
Total.. . . .	23,282

STATEMENT OF PERSONS REGISTERED AT BANFF SPRINGS HOTEL, BANFF, ALBERTA,
SEASON, 1913.

Alberta.. . . .	2,057
British Columbia.. . . .	471
Manitoba.. . . .	40
Saskatchewan.. . . .	206
Winnipeg.. . . .	514
New Brunswick.. . . .	23
Nova Scotia.. . . .	31
Ontario.. . . .	1,005
Prince Edward Island.. . . .	5
Quebec.. . . .	357
Alabama.. . . .	12

Florida..	18
Georgia..	20
Kentucky..	28
Louisiana..	34
Louisville..	10
Mississippi..	15
North Carolina..	7
South Carolina..	10
Tennessee..	29
Arizona..	8
California..	299
Colorado..	18
Idaho..	12
Los Angeles..	745
Montana..	16
Nevada..	1
New Mexico..	3
Oregon..	149
San Francisco..	278
Washington State..	235
Arkansas..	18
Kansas..	88
Missouri..	30
Nebraska..	32
Oklahoma..	20
Omaha..	24
Texas..	35
Milwaukee..	69
Minnesota..	81
Minneapolis..	176
North Dakota..	18
South Dakota..	19
St. Paul..	81
Wisconsin..	121
Connecticut..	98
Delaware..	12
District of Columbia..	20
Maine..	19
Maryland..	77
Massachusetts..	288
New Hampshire..	8
New Jersey..	141
New York..	966
Pennsylvania..	286
Rhode Island..	44
Vermont..	9
Virginia..	57
West Virginia..	15
Africa..	28
Australia..	118
Austria..	4
China..	36
England..	796
France..	35

Germany.. . . .	45
Chicago.. . . .	829
Cincinnati.. . . .	88
Cleveland.. . . .	83
Detroit.. . . .	82
Illinois.. . . .	192
Indianapolis.. . . .	57
Iowa.. . . .	39
Indiana.. . . .	134
Michigan.. . . .	78
Ohio.. . . .	163
Pittsburg.. . . .	124
St. Louis.. . . .	165
Hawaii.. . . .	25
Holland.. . . .	15
India.. . . .	21
Ireland.. . . .	14
New Zealand.. . . .	95
Scotland.. . . .	107
Switzerland.. . . .	4
Wales.. . . .	7
West Indies.. . . .	4
Italy.. . . .	1
Japan.. . . .	10
Russia.. . . .	4
Belgium.. . . .	8
Cuba.. . . .	1
Straits Settlements.. . . .	1
Spain.. . . .	1
New South Wales.. . . .	11
Portugal.. . . .	2
Denmark.. . . .	2
Philippine Islands.. . . .	2
Sweden.. . . .	1
Norway.. . . .	3
Channel Islands.. . . .	2
Unlocated.. . . .	272
<hr/>	
Total, 1913-14.. . . .	13,193

STATEMENT OF PERSONS REGISTERED AT CHALET LAKE LOUISE, LAGGAN, ALBERTA,
SEASON 1913.

Alberta	1,085
British Columbia	305
Manitoba	46
Saskatchewan	190
Winnipeg	270
New Brunswick	18
Newfoundland	2
Nova Scotia	28
Ontario.. . . .	1,004
Quebec	535

Alabama	18
Florida	22
Georgia	36
Kentucky	41
Louisville	9
Louisiana	36
Mississippi	21
North Carolina	3
South Carolina	6
Tennessee	38
Wyoming	2
Arizona	4
California	468
Colorado	26
Idaho	35
Los Angeles	339
Montana	12
Nevada	5
New Mexico	1
Oregon	220
San Francisco	315
Washington State	353
Arkansas	10
Kansas	53
Kansas City	78
Missouri	62
Nebraska	91
Oklahoma	20
Omaha	32
Texas	89
Chicago	808
Cincinnati	98
Cleveland	114
Detroit	114
Illinois	318
Indiana	97
Indianapolis	51
Iowa	271
Michigan	178
Ohio	249
Pittsburg	127
St. Louis	160
Milwaukee	135
Minnesota	140
Minneapolis	289
North Dakota	22
South Dakota	32
St. Paul	10
Wisconsin	178
Connecticut	48
Delaware	15
District Columbia	44
Maine	25

Massachusetts	371
New Hampshire	15
New Jersey	170
New York	1,190
Pennsylvania	468
Rhode Island	32
Vermont	12
West Virginia	18
Virginia	8
Africa	36
Australia	98
Austria	10
China	17
England	539
France	19
Germany	29
Hawaii	44
Holland	12
India	17
Ireland	18
Italy	3
New Zealand	57
Russia	3
Scotland	70
Switzerland	6
Norway	1
Fiji Islands	1
Japan	11
Belgium	5
Egypt	1
Cuba	1
Hamburg	2
New South Wales	6
Maryland	90
British Guiana	2
Sweden	1
Unlocated	246
Total 1913	12,826
Total 1912	12,511
Increase	315

VISITORS REGISTERED AT THE KING EDWARD HOTEL from April 1, 1913, to March 31, 1914. (Hotel closed for five weeks in February and March, owing to fire).

Canada	4,270
United States	822
England	22
Scotland	12
Australia	9
Germany	1
Denmark	1
New Zealand	4

Peru..	1
Russia..	2
Wales..	1
Austria..	1
	<hr/>
	5,436

VISITORS REGISTERED AT THE CHATEAU RUNDLE (Sanitarium Hotel) from April
1913, to March 31, 1914.

Canada..	4,359
United States..	840
England..	158
Ireland..	17
Scotland..	86
Australia..	27
Germany..	7
Japan..	2
France..	3
South Africa..	4
New Zealand..	22
Hawaii..	9
China..	2
Mexico..	1
	<hr/>
	5,375

VISITORS REGISTERED AT MOUNT ROYAL HOTEL from April 1, 1913, to March 31, 1914.

Canada..	4,345
United States..	770
England..	84
Ireland..	15
Scotland..	30
Australia..	33
Germany..	5
Japan..	3
Holland	2
India	1
France..	3
Norway and Sweden..	1
South Africa..	2
New Zealand..	15
Switzerland..	2
China..	2
Wales..	1
Austria..	2
Bermuda..	1
Belgium..	1
	<hr/>
	5,318

VISITORS REGISTERED AT ALBERTA HOTEL from April 1 to March 31, 1914.

Canada.....	4,854
United States.....	349
England	22
Ireland	2
Scotland	10
Australia	9
Germany	1
South Africa	1
New Zealand	1
Total.....	5,249

VISITORS REGISTERED AT GRAND VIEW VILLA from April 1, 1913, to March 31, 1914.

Canada	563
United States	41
England	10
Scotland	2
Australia	3
Germany	2
Total.....	621

VISITORS REGISTERED AT HOT SPRINGS HOTEL.

Canada.....	561
United States.....	36
Total	597

VISITORS REGISTERED AT HOMESTEAD TEMPERANCE HOTEL from April 1, 1913, to March 31, 1914: 1,300, list of nationalities not available.

SUMMARY.

Banff Springs Hotel.....	13,193
King Edward Hotel.....	5,346
Chateau Rundle.....	5,375
Mount Royal Hotel.....	5,318
Alberta Hotel.....	5,249
Grand View Villa.....	621
Hot Springs Hotel.....	597
Homestead Hotel.....	1,300
Lake Louise Chalet.....	12,826
Summer cottagers and campers.....	5,000
Estimated Excursionists	6,000
Total	60,825



Alpine Club Camp at Cathedral Mountain, 1913.



The Simple Life, Rocky Mountains Park.

APPENDIX No. 2c.

REPORT OF THE ALPINE CLUB OF CANADA.

In 1913, the club held two large camps. The first in operation from July 15, to July 25, was situated in the Yoho Park, in the valley of Cascade creek, the outlet of the beautiful lake O'Hara. It was pitched directly below Cathedral mountain, of which the snow-covered summit rose clearly in view.

The site was a superb one, in a park-like glade of the forest beside a rushing glacial torrent. The canvas city of a few days' existence spread itself on both sides of the stream, inter-communication being given by means of temporary rustic bridges. On one side were the official quarters, the dining canopy, the great fire-circle, the gentlemen's quarters and the married quarters; on the other side the ladies quarters. The "married quarters" is becoming a distinctly popular feature at the camp, some fifteen couples bringing their own tents, and enjoying their sojourn in the wilderness in a truly domestic fashion.

The second camp was situated in Mount Robson park, immediately below the northeast face of that "mighty monarch," who soars supreme above all compeers in the section of the Rocky mountains over which he reigns supreme.

The "Cathedral" camp was primarily for the benefit of graduating members, of whom over sixty qualified for active membership on the following peaks: Cathedral mountain (10,454 feet); mount Huber (11,041 feet); mount Oderay (10,165 feet); mount Victoria (11,335 feet) and Popes peak (10,360 feet).

One hundred and ninety-five persons were placed under canvas. It was a remarkable gathering, and, for several reasons, the most successful camp yet held. Nearly the entire number stayed for the full period, the zest shown being well illustrated by the fact that over sixty persons arrived the day before the official opening. The weather was perfect, and each day seemed more beautiful and more enticing than the preceding one. All around rose towering peaks set with snow and ice, the summits of the higher ones crowned by wonderful piles of white *cumulus* clouds, which are seen to such advantage during the month of July, and send joy to the hearts of artist, photographer, and nature-lover alike.

Two subsidiary camps were placed in conjunction with the main "Cathedral" camp; one at lake O'Hara to enable expeditions and climbs to be made in the vicinity of that wonderfully beautiful mountain tarn, and to visit ice-bound lake Oesa and Opabin pass; the other was set at timberline on MacArthur pass. The latter was chief favourite, and daily parties made expeditions to it to visit lake McArthur, that rock-bound glacial lake of bright cerulean blue wrapped in the arms of mount Biddle. The lake, which is unique of its kind, lies above timberline, and the Biddle glacier buries its icy nose in the crystal waters.

Chief of events may be recorded the splendid two-day expedition made from the O'Hara camp, comprising a complete circuit of mount Lefroy (11,220 feet) and mount Hungabee (11,447 feet). It was made via the Abbot, Mitre, Wastach, Wenkchemna and Opabin passes, or vice versa, and, in addition to crossing these five passes, entailed the traverse of six glaciers, viz., the Victoria, Lefroy, Mitre, Horseshoe, Wenkchemna and Opabin. For the purposes of the expedition a halfway camp was placed in the upper reaches of Paradise valley, where the several parties spent one night.

This circular traverse is without a peer, and was largely patronized, each member on returning declaring both wonder and delight at the magnificence of the alpine

scenery, the snow and ice, the towering peaks, the rushing torrents, the gem-like lakes, the crystall icefalls,—where every step disclosed greater wonders and more fascinating views.

As principal guest we had with us Professor Charles E. Fay, past-president of the American Alpine Club and Appalachian Mountain Club, than whom there is none that the Alpine Club more delights to honour. Professor Fay is well known to us as one of the earliest explorers in the Canadian Rockies, and as one who has done more than any other man to explore them and bring them to public notice. His first ascents and original explorations in this field would fill a volume of no small size that would furnish the most fascinating kind of reading.

The mountain clubs represented were: the Alpine Club (England), the Swiss Alpine Club, the Italian Alpine Club, the American Alpine Club, the Appalachian Mountain Club, and the Mazamas, also the Royal Geographical Society.

The various countries, provinces, states and places represented are as follows:—

CANADA.

British Columbia.—Fernie, Kelowna, Revelstoke, Rossland, Sidney, Vernon, Vancouver, Victoria, Wilmer.

Alberta.—Banff, Bow Island, Calgary, Edmonton, Edson, Lethbridge, Macleod, Medicine Hat, Okotoks, Pine Lake.

Manitoba.—Winnipeg, Virden.

Saskatchewan.—Drinkwater, Saskatoon, Moosejaw, Regina.

Ontario.—Toronto.

Quebec.—Montreal.

GREAT BRITAIN.

England.—London.

SWITZERLAND.

Interlaken.

UNITED STATES.

Indiana.—Lafayette.

Illinois.—Chicago.

Massachusetts.—Boston.

New Jersey.—East Orange, Summit.

New York.—Brooklyn, New York.

Oregon.—Portland.

Pennsylvania.—Bryn Mawr.

GERMANY.

Detmold.—Lippe.

AUSTRIA.

Vienna.

Mr. Hayter Reed, manager-in-chief of the Canadian Pacific Railway hotels, again placed at our disposal two of the Company's Swiss guides: Rudolph Aemmer and Christian Hasler, Jr., of Interlaken. The former has been with us at a number of our camps. It is a very wise policy on the part of the railway company to keep these professional mountaineers, the best to be had, at their hotels during the summer months, and there is no doubt it has been the main reason why so very few accidents

have been recorded in the Canadian Rockies. Conrad Kain, guide, of Nasswald. Raxalpe, who for a number of years has been attached to the Alpine club in a professional capacity, was in attendance for part of the time.

The transport for the camp was in the hands of James Simpson, outfitter and hunter, of Banff, the "Sunny Jim" of the Rockies. Jimmy Simpson has catered to the Alpine club for a number of years, and has always given it the best of satisfaction. He was assisted by Ernie Brearley of Banff, and Bob Logan, of Jumping Pond.

Before the camp closed, an expedition by the Director and several assistants was made to the Yoho Glacier, and the yearly measurements for the flow of the ice and for advance or retreat were taken. These measurements have been carried on since 1906, and now furnish a valuable series for the information of the International Society to report on the action of glaciers throughout the world.

APPENDIX No. 3.

REPORT OF THE SUPERINTENDENT OF YOHO AND GLACIER PARKS.

FIELD, B.C., March 31, 1914.

The Chief Superintendent, of Dominion Parks,
Edmonton, Alberta.

SIR,—The early spring of 1913 permitted us to open work in the park on May 1. Operations were begun on raking the streets of Field clear of the ordinary accumulations of refuse. Over one hundred trees were planted along the streets and one thousand yards of gravelling done.

Inspection was made of all government lots in Field by the Provincial Health officer and myself, and written instructions, where necessary, were issued requiring the necessary cleaning up to be attended to by all lot holders. I may state that this matter was well attended to, and the lots and streets during the summer presented a very clean appearance. It was found necessary later in the season to notify some of the lot holders regarding noxious weeds, and in order to set an example we cut or pulled all such on the streets. The Railway company were also notified in this regard, and responded promptly by clearing their townsite of weeds.

Widening and gravelling were then undertaken on the Ottertail drive. On the first mile west of Field the roadway was widened, ditches cleared out and several new culverts put in. Three hundred and thirty-five loads of gravel were hauled for this drive. Mile posts were also placed on the first 6 miles.

A greatly needed convenience—a proper nuisance ground—was supplied by clearing an area west of Field, some distance from the drive and building a road to it. The old ground was on the bank of a stream running into the Kickinghorse river, and had to be relinquished as it was polluting the river.

After completing the above work on the streets of Field, the Ottertail drive and the nuisance ground, attention was directed to widening, gravelling and making general repairs to the Emerald lake drive and the branch to the natural bridge. All necessary widening, etc., on this drive, about nine miles in extent, was rushed to completion and finished on July 14. Altogether, 1,465 loads of gravel were hauled, the covering on the bridge over Emerald creek renewed, and two smaller bridges between mileage 5 and 6 completely rebuilt. In order to provide shelters for sec-



Takakkaw Falls, Yoho Park.

This torrent, which has its source in the glacier between Mounts Balfour and Daly, swirls wildly down one hundred and fifty feet, then, in an unbroken column of sparkling water, plunges almost a thousand feet upon the rocks below, and, descending in a series of cascades for another five hundred feet, rushes into the Yoho River.

tionmen to keep the road in repair, and to eliminate the necessity of providing tents to house these men, a cabin was built at Emerald Creek. It is intended to place the floor, roof and windows in this cabin in the spring, and also to construct two other similar ones on this drive, as well as three or four on the Yoho drive.

On account of the very high water in August, a portion of the road 1 mile west of Field was in danger of being washed away, and I found it necessary to build a temporary crib 200 feet long to protect this point.

On Yoho drive the first work undertaken was the building of a crib 250 feet long and 3 feet high, to divert the water from the road one mile east. During high water in 1912 the river was running over, and along the drive at this place threatening to destroy about four hundred yards of the roadway; this crib amply protected this point during the present season.



Wapta Falls, Yoho Park.

Near mile 3, it was necessary to build 100 feet of dry rock wall to stop the encroachments of the river at that point. In the meantime it was found necessary to have the drive as far as Takakkaw falls ready for tourist traffic as the Canadian Pacific railway wished to establish their summer camp there on June 20. A small crew was placed at work clearing out the slides and rocks along the route to make this point accessible. In places snow ten feet deep was encountered, but the road was ready for traffic on June 19.

We began widening and gravelling on July 15, and pushed forward until all was completed to mileage 4½. In making these improvements, bridge No. 6, one-half mile east, was entirely rebuilt, and so placed as to do away with a very sharp curve in the road at that point. On the flat, 2½ miles out, two small bridges were removed and the road re-located, thereby shortening it.

At mile 3 the river had washed out about 200 yards of the roadbed so that it was necessary to build 330 yards of new road around this place and to construct a new bridge thirty feet long by eighteen feet wide. One thousand six hundred and ninety-two loads of gravel were hauled for the four and one-half miles east of Field, besides the widening, bridging and renewing of the culverts.

Between miles 10 and 11, bridges 16, 19 and 20 were altogether renewed, and bridges 17 and 18 were disposed of by making a new channel for the small stream at this point. One hundred and sixty-five loads of gravel were placed on this mile of Yoho drive and the grade on a steep hill at this point lowered.

Many tourists at the Canadian Pacific railway summer camp in the Yoho valley have been wanting a bridge over the Yoho river, opposite Takakkaw falls, to enable them to get close to the bottom of the falls. We, therefore, built a new footbridge across the stream, and roughly cleared a trail to the falls, so that it is now possible to get right up to the base. Some work will be required on this footpath to put it in first-class condition.

I would suggest that this trail be extended along the same side of the river, as far as the Minto cascade, a beautiful series of falls almost equal to the Takakkaw in volume, but tumbling over cliff after cliff to the river bottom below. This beautiful cascade cannot be enjoyed from the present trail which passes through a heavily timbered country which completely shuts off the view. By the building of this trail, a fine return walk would be formed from the camp, which would be about six miles in length, and would be a great attraction.

Some work was also done at widening the two turns on the switchback, and clearing out rocks and mud which had come down during the season.

During October and November, we worked at clearing the cemetery site, and repairing and replanking the bridge over the Kickinghorse river at Field, besides building a crib to direct the river channel at the bridge. The cemetery site was nearly all cleared and 600 yards of road built to it. A bridge 24 feet long was also built over the stream on this road.

The stringers of Kickinghorse river bridge were blocked up, the old decking removed and replaced with new 3 inch plank. Four hundred and fifty feet of cribbing was built and the two centre piers of the bridge protected by large rocks hauled for the purpose.

TRAILS.

During the season much repair work was done on trails. The first four miles of Burgess Pass trail, the trail to the fossil beds, and the one from Ottertail to Leancoil, were gone over during the month of May. In June, a crew was placed on the Lake O'Hara trail, in order to put it in good condition for the Alpine club, which held its annual camp in this valley. The crew worked here until the arrival of the club, and a number of the members reported to me that they found the trail in very good condition. The trail to Sherbrooke lake was also cleared in July. Clearing was then started on the trail to Summit lake, Yoho pass, and Twin falls. All was finished to these two points by the end of July.

The bridge over Twin Falls stream was so weak that we rebuilt it. About a mile of the trail from Twin falls to Summit lake had also to be re-located, and considerable corduroying done along the base of mount President. Also, there were many washouts on the trail over the moraine below Michael glacier, which had to be repaired, besides removing fallen timber and rocks from the remainder of the distance from Twin falls to Field over Burgess pass.

During August, Yoho Park was favoured with a visit from the International Geological Society, about one hundred members taking the tramp to the fossil beds, and also a drive to the Yoho valley. We sent the crew over this trail again before their arrival, in order to put it in the best condition possible. Following this, the men were moved to the trail from Ottertail bridge to lake McArthur. Approximately seven miles of this trail were repaired, the heaviest work being the construction of two bridges over the Ottertail river.

I find that this trail to lake McArthur was originally located by prospectors, who were looking only for the easiest route to their claims, and did not take into consider-

ation the scenic beauties of the valley. As a consequence, the trail is in places very steep, in others very boggy, and, instead of keeping up on the shoulders of the eastern slopes, from which many beautiful views would greet the eye of the visitor, it is principally down in the river bottoms from which scarcely any peaks can be seen. I went over twelve miles of this country this season, and I am satisfied that a much better location can be found, which will make the trip to lake McArthur much shorter, as well as providing many excellent views of the Ottertail range, which are now altogether unseen.

Fairly good fishing may be had in the waters of the Ottertail river, and also in Goodsir creek. The construction of a new trail, or else the genuine repairing of the old trail, will then make possible a beautiful two or three days' trip over this route, whereas, as this trail now exists, it is almost impossible to get around.



Water Funnel above Natural Bridge, Field.

Later in the season, the Chief Superintendent and myself spent three or four days on a trip of inspection to the Ice River valley. The work done by our trail crew consisted chiefly of the repairing of all bridges over this route. These had been built by the Provincial Government some years ago, and were in such a decayed condition that all had to be renewed. The repairs effected will, however, leave this trail in good condition for some years excepting the usual light repairs. From Leancoil, we made a side trip to Wapta falls, about 3 miles distant from the railway. Here the combined waters of the Kickinghorse and Beaverfoot rivers plunge over a level stratum of rock sixty or seventy feet to the level below, making a very imposing scene.

In order to provide for the transportation of supplies to men in case of forest fires, we should have a number of pack trails cleared, which would permit pack horses to get to the remoter portions of this park. A number of the routes most advantageous for this purpose have been marked out and submitted for consideration.

Another scenic trail proposed is up the Little Yoho valley, branching from the Twin falls trail, passing along the north of Mounts President and Vice President,



Lace Falls, Lake O'Hara, Yoho Park. Trail 24.



On the Way to the Nakimu Caves, Glacier Park.

over the Kiwetinok pass into the Amiskwi valley. This trail will then join the present trail about four miles from the summit of the pass. It will open up new country accessible by ponies and will make a beautiful three days' pony trip. Good fishing is also to be found in the upper waters of the Amiskwi river. I might further add that the Alpine Club of Canada has done much exploration and climbing of mountains on both sides of the Little Yoho valley.

GLACIER PARK.

ROADS.

By June 12, I found the snow had disappeared sufficiently to commence work on the roads and trails in Glacier park, so a small crew was sent from Field to Glacier under charge of foreman Patterson. In order to get to the end of the road already completed, it was necessary to shovel through the remains of several snow-slides. Considerable clearing of ditches, culverts, and fallen side-banks was done on the first four



Glacier on President Range, Yoho Park.

miles of this drive, after which operations were started on new construction. In order to avoid the descent of about three hundred feet by way of the trail to the Nakimu caves, we ran the line for the right of way through the timber about one-half mile, until we reached the slide-swept slopes of Cougar valley. We then cleared and roughly graded this distance, until we connected it with the existing trail. By doing so we shortened the distance to be covered to the caves by approximately one mile, thereby permitting the trip to be made in much shorter time, and cutting out a very stiff climb from the railway track to the boundary of the timber.

Construction work on the building of this road was pushed forward during half of June and the months of July, August, and September, about 2 miles of new road

being completed. This work was much heavier than I anticipated and, owing to the narrow valley and steep slopes, it was necessary to put in one switchback. During September, Mr. Walker, D.L.S., was sent to do the location work for the remainder of the distance to the caves, and I am advised there are yet 6,000 feet to be built in order to bring the road to the Government cabin at the caves. This portion will be the heaviest part of the construction; but, when completed, will make it possible for additional hundreds to visit the caves, and also to make the short trips to the Upper Cougar valley and to the Baloo pass. Many who do not care to take the trip on the "hurricane deck" of a broncho, will then be able to ride there in a carriage.

On no other drive in the Rocky Mountains, Yoho, or Glacier parks will there be found the diversity of scenery that will be afforded by this drive to the Nakimu caves. I submit some views selected to show some of the attractions along this drive. Looking north up Cougar valley are Mounts Bagheera, Catamount, and Ursus Major, while on the return drive looking south are to be seen Mounts Bonney, Green, Abbott, and Ross peak, with the Green, Bonney and Lily glaciers hanging on the sides of the peaks. The completion of this drive will also furnish tourists with a pleasant walk from Glacier house to the caves, and during last summer I noticed quite a number who made this journey on foot.

TRAILS.

The trail from Glacier to the caves via. Rogers pass was about all that the Government crew had to put into repair this season, owing to the Railway company attending to the other shorter trails in the vicinity. We did, however, build a portion of a new trail crossing the moraine below the Great Glacier, thereby connecting the new trail on the west side of the valley with the old one on the east side. By doing this we have now an alternative route, both going to and coming from the Great Glacier, enabling the visitor to enjoy the scenery on both sides of the Illecillewaet valley. The Railway Company has also built several miles of good trail from Marion lake towards the summit of Mount Abbott, which, when completed, will afford access to the summit, whence many beautiful views of the surrounding country may be obtained.

I would suggest that some location work in connection with trails in Glacier park be undertaken during next season, particularly with a view to securing a better trail from the summit of Baloo pass to the caves. Owing to the very abrupt slopes and deep ravines, and the closeness of the bedrock to the surface, this two miles of trail is very difficult for ponies, and there seems to be no possible way to better the condition of the existing portion. However, I am of the opinion that a better grade and a safer trail can be procured by carrying the trail to the westward up the Upper Cougar valley, and then turning east to the caves. This route is worthy of investigation.

A number of visitors, whom I have met at Glacier during the season, have praised the beauties of the scenery to be found in the Beaver River valley southward from Bear creek, and some have asked to have the brush and timber cleared from the existing trail, and to have several small bridges removed. Another request submitted is for a trail leading up Loop creek to the Bonney glacier. This appears to be a very reasonable proposition and would entail the construction of only about five miles of new trail. This would, moreover, open up another new route, which would be appreciated by the annual visitors at this popular resort.

GENERAL.

The Canadian Pacific Railway Company have located camps, etc., near Glacier and Bear Creek, for the purpose of constructing the five mile tunnel through Mount Macdonald. Considerable progress has already been made with this work. With the completion of the tunnel and the revision of the right-of-way, a much easier grade will

be secured, thereby curtailing operating expenses on this part of the mountain division. In connection with this work a Government Inspector has been placed at each end of the tunnel, whose duties are to safeguard the interests of parks in every way.

Respectfully submitted,

F. E. MAUNDER,
Superintendent Yoho and Glacier Parks.

STATEMENT of persons registered at "Mount Stephen" House, Field, B.C., season 1913.

Alberta	507
British Columbia	546
Manitoba	4
Saskatchewan	54
Winnipeg	211
New Brunswick	10
Nova Scotia	15
Newfoundland	1
Ontario	349
Quebec	83
Alabama	4
Florida	5
Georgia	8
Kentucky	13
Louisiana	12
Mississippi	3
North Carolina	1
Tennessee	9
Wyoming	1
Arizona	1
California	100
Colorado	8
Idaho	2
Los Angeles	62
Montana	9
New Mexico	2
Oregon	39
San Francisco	77
Washington State	78
Kansas	10
Kansas City	13
Missouri	19
Nebraska	13
Oklahoma	11
Texas	6
Milwaukee	45
Minneapolis	37
Minnesota	57
North Dakota	14
South Dakota	10

St. Paul	16
Wisconsin	138
Connecticut	20
Delaware	2
District Columbia	25
Maine.. . . .	10
Maryland	29
Massachusetts	167
New Hampshire	4
New Jersey	55
New York.. . . .	352
Pennsylvania	130
Rhode Island	20
Vermont.. . . .	2
Virginia	3
West Virginia	4
Africa	7
Australia	37
Austria.. . . .	6
China	18
England	311
France	13
Germany.. . . .	24
Chicago	7
Cincinnati.. . . .	37
Cleveland	34
Detroit	32
Illinois	62
Indiana.. . . .	37
Indianapolis	24
Iowa	62
Michigan	45
Ohio	66
Pittsburg	26
St. Louis	661
Hawaii	3
Holland	4
India	10
Ireland	15
Mexico	1
New Zealand	36
Russia	1
Scotland	56
Switzerland	2
Wales	1
East Indies	1
Japan	16
Belgium	2
Cuba	2
Jamaica	1
New South Wales	4
British Guiana	2
Denmark	1
Sweden.. . . .	3

Norway	2
Unlocated	119
<hr/>	
Total 1913	4,716
Total 1912	8,443
Decrease	3,727
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STATEMENT of Persons Registered at Emerald Lake Chalet, season 1913.

Alberta.. . . .	190
British Columbia.. . . .	94
Manitoba.. . . .	4
Saskatchewan.. . . .	23
Winnipeg.. . . .	552
New Brunswick.. . . .	3
Nova Scotia.. . . .	3
Ontario.. . . .	114
Quebec.. . . .	58
Alabama.. . . .	2
Florida.. . . .	2
Georgia.. . . .	3
Kentucky.. . . .	3
Louisiana.. . . .	2
Tennessee.. . . .	13
California.. . . .	60
Colorado.. . . .	2
Idaho	5
Los Angeles	53
Montana.. . . .	1
Oregon.. . . .	21
San Francisco.. . . .	65
Washington.. . . .	39
Arkansas.. . . .	4
Kansas.. . . .	5
Kansas City.. . . .	9
Missouri.. . . .	3
Nebraska.. . . .	1
Texas.. . . .	5
Chicago.. . . .	127
Cincinnati.. . . .	17
Cleveland.. . . .	10
Detroit.. . . .	7
Illinois.. . . .	49
Indiana.. . . .	5
Indianapolis.. . . .	6
Iowa.. . . .	41
Michigan.. . . .	11
Ohio	44
Pittsburg.. . . .	6
St. Louis.. . . .	45
Milwaukee.. . . .	33
Minnesota.. . . .	11

Minneapolis.. . . .	69
N. Dakota.. . . .	4
S. Dakota.. . . .	2
St. Paul.. . . .	25
Wisconsin.. . . .	15
Connecticut.. . . .	21
Delaware.. . . .	3
Dis. Columbia.. . . .	4
Maine.. . . .	2
Maryland.. . . .	14
Massachusetts.. . . .	187
New Hampshire.. . . .	8
New Jersey.. . . .	28
New York.. . . .	271
Pennsylvania.. . . .	92
Rhode Island.. . . .	5
Vermont.. . . .	1
West Virginia.. . . .	7
Africa.. . . .	1
Australia.. . . .	7
Austria.. . . .	1
China.. . . .	9
England.. . . .	151
France.. . . .	4
Germany.. . . .	9
Hawaii.. . . .	5
India.. . . .	2
Ireland	5
New Zealand.. . . .	5
Scotland.. . . .	17
Switzerland.. . . .	4
West Indies.. . . .	3
Belgium	1
New South Wales	1
Alaska.. . . .	2
Norway.. . . .	4
Unlocated.. . . .	20
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Total, 1913.. . . .	2,260
“ 1912.. . . .	1,192
Increase	1,068

STATEMENT of Persons registered at Glacier House, Glacier, B. C., Season, 1913.

Saskatchewan.. . . .	30
Alberta.. . . .	149
British Columbia.. . . .	456
Manitoba.. . . .	12
Winnipeg.. . . .	88
New Brunswick.. . . .	8
Nova Scotia.. . . .	8
Ontario.. . . .	220
Quebec.. . . .	40
Alabama.. . . .	3

Florida.. . . .	12
Georgia.. . . .	11
Kentucky.. . . .	11
Louisiana.. . . .	16
Louisville.. . . .	8
Mississippi.. . . .	9
North Carolina.. . . .	4
South Carolina.. . . .	5
Tennessee.. . . .	14
Arizona.. . . .	5
California.. . . .	164
Colorado.. . . .	10
Idaho.. . . .	11
Los Angeles.. . . .	111
Montana.. . . .	6
Nevada.. . . .	1
Oregon.. . . .	62
San Francisco.. . . .	125
Washington State.. . . .	111
Arkansas.. . . .	6
Kansas.. . . .	26
Kansas City.. . . .	15
Missouri.. . . .	34
Nebraska.. . . .	27
Oklahoma.. . . .	2
Omaha.. . . .	10
Texas.. . . .	15
Chicago.. . . .	293
Cincinnati.. . . .	56
Cleveland.. . . .	46
Detroit.. . . .	36
Illinois.. . . .	111
Indiana.. . . .	50
Indianapolis.. . . .	23
Iowa.. . . .	116
Michigan.. . . .	74
Ohio.. . . .	85
Pittsburgh.. . . .	40
St. Louis.. . . .	68
Milwaukee.. . . .	94
Minnesota.. . . .	42
Minneapolis.. . . .	82
North Dakota.. . . .	2
South Dakota.. . . .	20
St. Paul.. . . .	35
Wisconsin.. . . .	80
Connecticut.. . . .	30
Delaware.. . . .	2
District Columbia.. . . .	6
Maine.. . . .	8
Maryland.. . . .	47
Massachusetts.. . . .	330
New Hampshire.. . . .	7
New Jersey.. . . .	99

New York State.. . . .	434
Pennsylvania.. . . .	198
Rhode Island	9
Vermont.. . . .	2
Virginia.. . . .	7
West Virginia	6
Africa.. . . .	19
Australia.. . . .	10
Austria.. . . .	3
China.. . . .	13
England.. . . .	82
France.. . . .	78
Germany.. . . .	25
Hawaii.. . . .	23
Holland.. . . .	7
India.. . . .	7
Ireland.. . . .	6
New Zealand.. . . .	47
Philipine Islands.. . . .	27
Scotland.. . . .	27
Switzerland.. . . .	1
Japan.. . . .	9
Belgium.. . . .	2
Bavaria.. . . .	1
St. Petersburg.. . . .	1
New South Wales.. . . .	8
Finland.. . . .	1
Canal Zone.. . . .	2
West Indies.. . . .	2
Norway.. . . .	1
Unlocated.. . . .	38
Total, 1913.. . . .	5,057
Total, 1912.. . . .	5,419
Decrease.. . . .	362

APPENDIX No. 4.

REPORT OF THE SUPERINTENDENT OF BUFFALO PARK.

WAINWRIGHT, ALBERTA, March 31, 1914.

The CHIEF SUPERINTENDENT
of Dominion Parks,
Edmonton, Alberta.

SIR,—I have the honour to submit herewith my second annual report as Superintendent of Buffalo park for the fiscal year ending March 31, 1914.

I have to report a most successful year's operations. When the frost was sufficiently out of the ground in the spring we set to work on our farm. We had a start of 42 acres of breaking, which were turned over during last season's operations, but it had to be harrowed and disced and prepared for the seed-bed. While doing this, we

had other teams ploughing the stubble land which was under crop last year, and also breaking up an additional 53 acres of oats which were all disced, harrowed and seeded. This was cut for green feed in sheaves in the fall. The year was a most favourable one, and our crop turned out splendidly. The crop from 92 acres at winter quarters was threshed for feed oats, and from it we obtained 4,330 bushels of the very best grade of oats. The balance was cut for green feed in sheaves.

After the crop was all put in, we immediately set to work to break up more land for the next year's crop, and were successful in turning over 300 acres of new land, which at different times during the season was thoroughly disced and harrowed and is now ready for the seed drill, as soon as the weather permits in the spring. The above new breaking was all completed on the fourth of July. We then put our outfits on the fireguard with discs, working the guard from winter quarters north and west to the gate on the west side. This work proved unsatisfactory on account of the weeds and grass having grown so high and thick. Our outfits were then laid aside to commence haying, and the balance of the fireguarding was let by contract, and the entire guard ploughed. I am pleased to say, however, that this was not needed as we did not have a fire in this district during the entire season.



Buffalo Herd at Wainwright.

Photo by Superintendent.

Haying operations were commenced at the Wainwright end. We put up in the neighbourhood of one hundred tons of first class hay, and then put our outfits on the hay meadow at winter quarters. We had a most successful year at hay-making, having put up in the neighbourhood of 800 tons at winter quarters. This, together with the 400 tons left over from last year, and the numerous stacks of good oat straw, and also a number of stacks of green feed, will be more than an ample supply for this year. On any wet day which occurred during the haying, our teams were placed on the new land discing and harrowing, and the men not handling teams were placed on the main fence dropping posts. In this way no time was lost with either teams or men.

During the early spring, I placed a couple of riders on patrol, for the purpose of working among the buffalo and getting them used to horses. We found the benefit of this during the various "round-ups" this fall. The animals were much more

easily handled, and I think in time that we shall be able to work them like cattle. The riders also made weekly rides about the main fence, and in the early spring reported several posts swinging. I immediately put on a few men to replace the posts, but, when work was started on the south side, the fence was found to be in a most precarious condition. I put on a gang of men and almost every post on the south, north, and west sides was dropped. The east side was not so bad, on account of there being numerous cedar posts there. This work was commenced during the first week in June, and was completed in August. The re-set posts will, I expect, last two years, when it will be necessary to renew the whole fence line.

I propose next year, to cross-fence the main park into sections: one section for the old and surplus bulls; another section for the yearlings and two-year-olds, and the third section for the cows, and sufficient bulls only for breeding purposes. My aim in this connection is to breed up, and eliminate as much as possible too much inbreeding, which is bound to occur while the animals are allowed to run together continually.

Next year, I propose to build corrals to separate our stock into the different pastures, the corrals to be equipped with a squeeze gate, and also a dipping vat to be used in case of any outbreak among the buffalo. This year a number of cattle died around the park fence from black-leg, and I am advised by competent veterinary surgeons that there is nothing to prevent an outbreak of the same among the buffalo. I therefore wish to be in a position to handle the herd, in cases of any disease breaking out. The paddock at the Wainwright end is becoming very thin, and it will be absolutely necessary to extend its limits next year.

Last fall we constructed a fine large stable at winter quarters for the accommodation of our horses, and also a fine house for the accommodation of our men. The house has been completely furnished and both the buildings will fill a long-felt want. We are now in a position to hold good men the whole year round, and I am pleased to say that we have the best "bunch" of men that I ever saw working together. All the men take a deep interest in their work, which is a source of great comfort to me, as well as a great benefit to the department.

I also propose to fence the farm with high wire, to insure proper protection to our crop in future. This year we had considerable difficulty in keeping the stock out of it, and, after the grain was cut and placed in stooks, we were obliged to have men in the saddle day and night to protect it, until we had it threshed and the green feed stacked in the corral. We also experienced a great deal of trouble this year in holding the stock in winter quarters after the first round-up was made. The present fence is a low one, and the stock would break out at will, and scatter all over the park. We eventually had to give up the idea of trying to hold them, and our final round-up was not made until the first week in January, when we commenced feeding at winter quarters in order to hold the stock in. I propose next year to extend the winter quarters paddock one mile, and fence it with high wire, which will eliminate further trouble in the round-up. My idea in extending the pasture is due to the rapid increase of the stock, and also because the farm cuts off a considerable amount of the present pasture.

We constructed a small sleeping shack at the Wainwright end next to the caretaker's house, which also has been a long felt want, as previously any of our men who had to remain over night at this end were obliged to sleep in the stable. They can now be thoroughly comfortable in the new house, and, I assure you, very much appreciate the accommodation. We have also constructed a small lodge and stable for our game warden, at Rocky ford on the west side of the park. This portion of the park had never been patrolled during the winter months before, and, as a great many rumours were in circulation through the district that considerable poaching had been going on there, I placed a man on the west side to patrol that section for the winter months. This man had been living alone in a farm house which was vacant, on the west side, until we constructed the new house for him. This patrol will prevent any further violations of the park laws on that side of the park.

Our new buildings were constructed so late in the season that they did not secure a coat of paint. Next spring I hope to give all the buildings a coat of paint, and make them as attractive as possible.

I am pleased to report that the shrubs and trees around the Superintendent's quarters have done very well during the season. The lawn, however, like that of last year, was somewhat of a failure. In the spring I rolled the lawn with a heavy roller, and again during the summer after a heavy rain, but the result was not at all satisfactory. I intend next spring to disc the lawn and then roll it. I propose to make the grounds around the Superintendent's quarters a beauty spot, and an example to the district. This is the only Government house in this district, and I think it should be made as attractive as possible.

We were successful in sinking a well, adjacent to the Superintendent's house, to the depth of 357 feet, which has furnished an endless supply of beautiful water, and has been a great source of comfort.

The building of roads was somewhat neglected this year, on account of our being short of labour; but I hope next year to build a drive through the home park which will be appreciated by all attending visitors. This work will be commenced just as soon as we get the extension of the home park fence completed.



Elk in Buffalo Park.

For the accommodation of the farmers on the west side of the park, who were hemmed in by the park fence, we put in a gate on the north side, giving them an outlet with their grain to market. This has been greatly appreciated.

All our horses came through the season's work in first-class condition and the young stock broken to harness last year have developed into beautiful horses. Our saddle horses, during the spring and summer, could not stand the pace, and we found it necessary to increase the number of saddle horses by five. We bred only two of our mares last year and have an increase of two gelding colts this year. We bred all our mares this year, however, and expect a good number of colts next year. The breeding of our stock is somewhat of a problem with us, on account of no sire being registered in the south district. I should like to see the department place a good standard coach horse in here for breeding purposes, and thereby raise good general purpose stock fit for harness or saddle.

WILD ANIMALS.

The buffalo have done exceptionally well giving an increase of 236 and a decrease of 4. The heads and hides of the latter were saved, and disposed of according to instructions. Both the increase and decrease are very gratifying in comparison with other years.

The moose have also done well, and show a natural increase of 3, making the total now 13.

The elk are still keeping up their good record, giving this year a natural increase of 8, making the total number now 32, all in a most healthy, thriving condition.

The only antelope left are males, but they seem to be thriving very well. I should like to see about twelve female antelope shipped here, so that we might try our luck once more with this little animal. I should like to make a success of rearing this little animal in our parks, as it seems probable that in a few years it will be practically extinct. I believe our former failure was largely due to having too many males for the number of females. The males seem to thrive so well, that I fail to see why the females should not do as well with proper handling.

The wild deer in the park seem to be increasing very rapidly. Last fall I counted seventy in one day's ride. This was most fortunate, as it may be years before so many will be met with in one day.

The animals now in Buffalo park are as follows:

Buffalo.. . . .	1,453
Moose	13
Elk	32
Mule Deer, (estimated).. . . .	70
Antelope	4

GAME.

The feathered game is becoming very plentiful in the park, and seems to realize that it is thoroughly protected within the park limits. Even the geese have made it their breeding ground, and, from year to year, they will become more at home within the park limits. A great many true sportsmen have already recognized this valuable protection to the feathered game, and the overflow has this year afforded them an ample supply for their guns.

VISITORS.

The total number of visitors to the park this year was 3,500; this is an increase of 1,413 over last year. I look for a much larger increase when the Grand Trunk Pacific have completed their through line to the coast. We have no way of recording the different nationalities of the visitors, but it is almost safe to say that they are all Canadians as yet. Next year, when the line of railway is completed, we shall have to inaugurate some system of keeping record of the different visitors.

Before bringing my report to a close, I wish to call your attention to the very inadequate system of telephones now in vogue here. Our telephone line has been of no service this year at all, we would no sooner get it repaired than it would again break with the wind. This is a very important matter and it is necessary that we should have a thoroughly reliable system installed. It is not only a great protection in the case of fire, but also in the case of any of our men becoming seriously injured, and there is no telling when the latter may occur when men are working among wild animals. At the present time, if any of our men were to be seriously injured, it would take from four to five hours to secure medical relief, whereas a telephone would very

quickly get a medical man to their assistance. This matter is already being considered by the department, and I hope in the spring, when the weather permits, that there will be no delay in installing an up-to-date, reliable system.

In conclusion, I wish to thank the Commissioner and yourself heartily for your most valuable assistance in making this a most prosperous year for Buffalo park.

I am, sir,

Your obedient servant,

W. E. D. McTAGGART,

Superintendent.

APPENDIX No. 5.

REPORT OF THE SUPERINTENDENT OF ELK ISLAND PARK.

ELK ISLAND PARK, April 1, 1914.

The Chief Superintendent of Dominion Parks,
Edmonton, Alta.

SIR,—I have the honour to submit herewith my fourth annual report as Superintendent of Elk Island park for the fiscal year ending March 31, 1914.

I have to report a very favourable year. The park is becoming more widely advertised as a good summer resort, as the increased number of visitors will show: the visitors for the year numbered one thousand seven hundred and twenty-two.



Elk Island Park, Lamont, Alberta.

A number of improvements has been made during the year for the benefit of the visitors, and the work has been very much appreciated. I had the picnic grounds, situated on a pretty point in the lake, enlarged by cutting and burning the underbrush,

and had a drive made around the point, and a number of rustic seats erected about the grounds. At the extreme end of the point, and distant about fifty feet, is a small but picturesque island; I had this cleared up, and connected with the mainland by a substantial rustic foot bridge, so that it might really be called an extension of the main grounds. I also cleared a larger island for camping,—a beautiful place with a quantity of evergreen trees on it. I consider that these improvements have helped to swell the visitors' list, and I expect a larger increase next year, when the road from the sandy beach to the north fence, one mile west of the east fence, is completed. This road is about three miles long, and last summer I had it all cut and graded for one half mile from the north fence, and hope to see its completion in the early spring. This road is intended for the convenience of visitors from the east and north; it is also adjacent to the main line of the Canadian Northern Railway. It was formerly a long way round to the present single entrance, and visitors could not always get across the lake to Sandy beach; (the swimming and bathing spot), and I am sure that this road will be much appreciated.



Buffalo Herd in Elk Island Park.

Other trails were cut to drive in the buffalo on, when "rounding" them up; and they were found to be a great help this fall, when the animals were being driven into winter quarters. One of these trails was cut from the south side of the lake to the east fence—a distance of three miles—and one from the pasture fence, running south-east to the south fence, a distance of two miles. This part of the park is very rough with scrub and fallen timber hence the need of these two trails.

The fireguard around the outside fence, which was ploughed by contract, was cleared during the summer. A corral was also built, for the purpose of separating any animals from the herd that might need special care during the winter months.

I also had a fence constructed about the house and outbuildings, making a nice large yard on which the buffalo cannot trespass, as they occasionally did before.

The buffalo have done well this year, showing an increase of twelve calves and no loss. The herd of eighty-two head is in excellent condition at the present time, with the exception of one lame bull. In April last, we had nineteen moose, and to date we have twenty-six, three of which were shipped in during the summer by the provincial government. These also are in good condition.

The elk and deer are very wild, but any that have been seen during the year looked well; and, judging by the tracks, I believe they are increasing favourably.

The number of animals in the park at the present time is as follows:

	Males.	Females.
Buffalo	30	52
Moose	12	14
Elk (estimated)	8	33
Deer (estimated)	7	45

Your obedient servant,

ARCHIBALD COXFORD,

Superintendent.

APPENDIX No. 6.

REPORT OF THE SUPERINTENDENT OF WATERTON LAKE PARK.

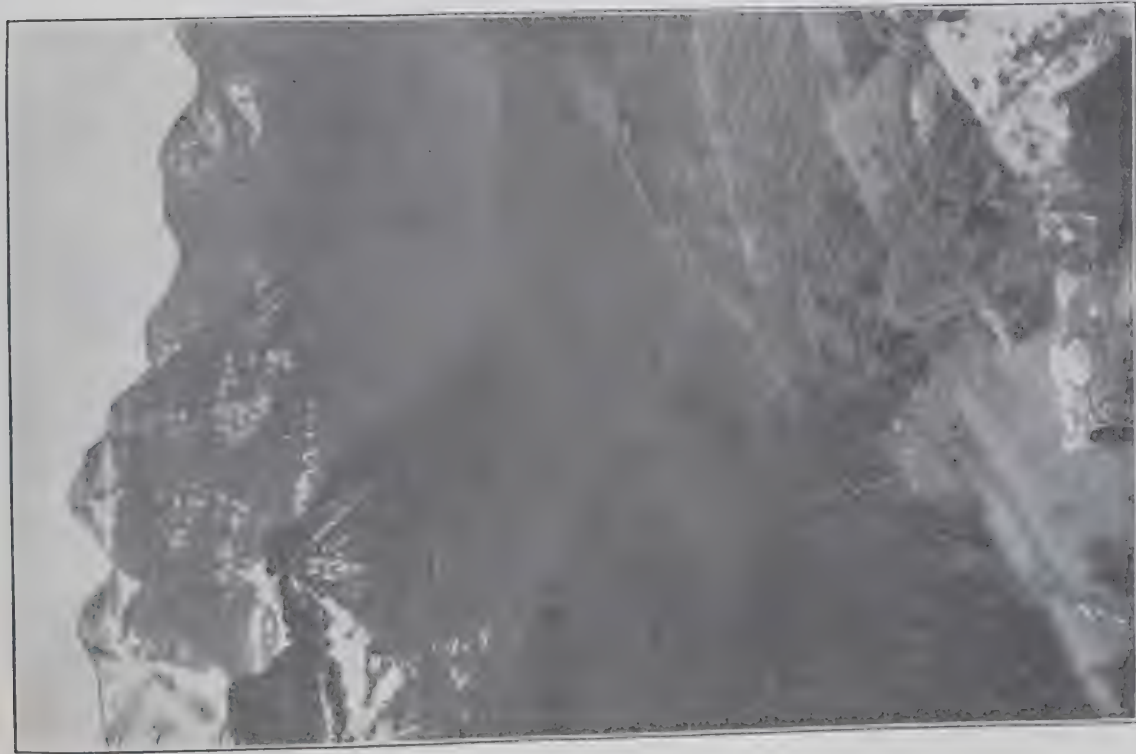
WATERTON MILLS, ALBERTA, April 1, 1914.

The CHIEF SUPERINTENDENT
of Dominion Parks,
Edmonton, Alberta.

SIR,—I have the honour to submit my annual report on matters pertaining to the Waterton Lake park.

A few years ago this little park was almost unknown, but each year larger numbers are finding out its many attractions. The district was first opened up in 1886 when the discovery of petroleum seepages in the vicinity caused a "stampede" of speculators. Most of the ventures proved unsuccessful, but from time to time new borings have attracted fresh attention, and I understand that a company is now preparing to try again.

On May 20, 1895, 54 square miles, extending as far south as the international boundary, were set aside by Order in Council for a Forest park. This area was subsequently reduced by the Forest Reserves and Parks Act of 1911 to 13.5 square miles: but there is a very strong feeling that this area is too small, and that it should be enlarged so as to make it adjoin the United States Glacier National park, which extends to the southern side of the international line.



Kincla Peak, Waterton Lakes Park.



Goat Mountain, 10,500 ft., Waterton Lakes Park.
Photo by Riggall.

VISITORS.

The number of visitors during the year shows an increase over the preceding one. These were made up as follows:

Registered at Hotel—Canadians and English	703
Other nationalities	50
Campers—Canadians and English	1,050
Other nationalities.	172
Total (approximately)	1,975
Total 1912-13	1,794
<hr/>	
Increase	181

Mr. Louis W. Hill, director of the Great Northern Railway, and Mr. R. A. Thompson, also a director, came from Helena, Mont., in an automobile in the record time of two and a-half days. We also had amongst visitors from the United States, Mr. and Mrs. Roberts, of Babb, Montana; (Mr. Roberts is engaged in erecting Swiss cottages in the Glacier National park, Mont.); and Mr. Galen, superintendent of that park. All were much pleased with their surroundings, and were quite surprised at the fine roads and trails. Mr. Riggs, of Baltimore, and Mr. McLean of the "Campfire" club were also here.

ROADS.

Much money has been spent in making good roads and trails, one from Cameron falls to Oil City, and one from the end of the wagon road to the international line. and a foot-path to lake Bertha, a lovely spot in the high mountains. There are good roads to Cardston, 34 miles; Pincher Creek, 38 miles; Macleod, 55 miles. We had many motors last summer from these and other points more distant.

ACCOMMODATION.

Mr. J. F. Hazzard, owner of the hotel, has greatly improved his beautifully situated building, and has enlarged it so that he can now accommodate quite a number of guests.

The lovely Cameron falls are close to here, and also the trails to the United States line and to Oil City. There is a fine gasoline launch, and a dozen or more row boats; and, for those who prefer the romance of outdoor life, there are lots of large tents, fully equipped.

LAKES AND FISH.

There are three lakes which are very deep, clear, and cold. They contain numbers of trout, some of large size, often thirty, and even fifty, pounds. There are also pike and grayling.

GAME.

All kinds of game have notably increased in the last three years. Four black bears were to be seen close to the office of the Superintendent for the greater part of the summer. Goat, mountain sheep, and deer, can be frequently seen. They are protected; no bird or animal is allowed to be hunted or disturbed in any way.

FUTURE REQUIREMENTS.

A bridge or ferry is much required on the Waterton river, and we hope some action will be taken in the near future. Mr. Hill stated that it was quite likely that his company would make an automobile road from Belton, on the Great Northern, to the head of the Upper Waterton lake, and put up a three hundred-roomed hotel. If this is done, it will bring a great many visitors to this park.

I have the honour to be, sir,

Your obedient servant,

JOHN GEORGE BROWN,

Forest Ranger

in Charge of Waterton Lakes Park.

APPENDIX No. 7.

REPORT OF THE SUPERINTENDENT OF JASPER PARK.

JASPER, ALBERTA, April 1, 1914.

The Chief Superintendent
of Dominion Parks,
Edmonton, Alberta.

SIR,—On reaching Fitzhugh in March, 1913, and looking over the area of Jasper park to get an idea of the laying out of the necessary works for the year, I was



Athabasca Valley, Jasper Park.

impressed with the immediate necessity of improving the sanitary conditions as the first and most important task, the abandoned construction camps, and those then in use, being found in a dangerous and shocking condition. With the aid of our wardens,

assisted by the small detachment of the Royal Northwest Mounted Police, this was vigorously attended to, in some cases causing considerable antagonism, especially among the foreign element engaged in construction work. Several convictions soon impressed these people with the necessity of complying with the demand, and I feel confident that, by this somewhat harsh but salutary means, we prevented a most serious epidemic of typhoid, a condition that prevailed in many camps on the British Columbia end of the construction work, during the summer of 1913.

The question of laying out the areas in which roads or trails should be built in the park was then gone into, and, as the east bank of the Athabaska, served by the the Grand Trunk Pacific Railway, was the only portion having railway communication, it was decided to confine operations to that side, so as to enable the expected tourists to have adequate means of reaching the many points of interest on that side of the river.

The park, shaped somewhat like a large sickle or fish-hook, is divided by the Athabaska and Miette rivers. The only means of crossing the former, except by fording at very low water, was a very old and dangerous ferry, operated by the Government at Mile 1004, Grand Trunk Pacific Railway, $3\frac{1}{2}$ miles southwest of Pochahontas. After consultation with Moïse Danis, ferryman, it was decided to abandon the use of the ferry, owing to the danger of operating the same, thus cutting off communication between the banks of the river for the greater part of the summer months. In this connection, a definite policy for the future will have to be adopted, looking to a permanent means of lateral communication within the park, and my short experience of this year makes me feel that it is imperative to construct a bridge opposite to Jasper (late Fitzhugh), and another towards the north and easterly end of the park, preferably between Jasper and Brulé lakes.

Owing to construction by the Grand Trunk Pacific and Canadian Northern Railways, the tote road running through the park was in many places destroyed, and, on that portion extending five miles northeast of Jasper, rendered unsafe by dangerous level crossings. The Canadian Northern Railway finally made diversion to replace the tote road so destroyed, giving to us a much better road than formerly. To the west of Jasper, the grade of the two railways crossed and recrossed the tote road in five places, within less than four miles. In one place the tote road ran between the two railway rights-of-way, in this locality about 50 feet apart, making a most dangerous condition.

After consultation, the chief superintendent ordered the construction of a new road, passing under the two railways at a point two miles west of Jasper, and down to the banks of the Miette river, which it follows for about eight miles, with three crossings of the river in that distance. This work was undertaken, on the agreement that the railways should construct permanent arches at the point above referred to, two miles west of Jasper. The Grand Trunk Pacific Railway has since constructed a handsome and substantial concrete arch costing \$17,000, and the Canadian Northern Railway is expected to carry out its portion of the work in 1914, when they commence operation through the park.

On laying this new road, I found that there would be quite an expensive piece of rock cutting to be done, if we followed the north bank of the Miette river, so it was decided to bridge the river twice, and avoid the expense, which has been done. Two substantial bridges, that have withstood the highest floods for some years past, have been completed with over 100 cubic yards of rock in the piers, and "riprapping" and a permanent road of over a mile constructed. This road, from the railways to Spruce Grove bridge, took a large amount of filling with boulders and coarse gravel, and required several culverts, as it passed through low ground that is flooded by a backwash of the Miette during high water season. The portion between the bridges was cut through a heavy growth of black willow on the south bank of the Miette, and is well graded with the finest quality of shale, which only requires the use of a road



Pyramid Mountain, Jasper Park.



Falls of the Stoney River 'Jasper Park.

roller to make it a first-class permanent road. Care has been taken to make deep ditches in every case, and, when the road is rolled and finished, we shall round up the crown so as to make it "first-class" in every respect. It is fortunate, in all the road operations, that excellent material for road building can be obtained quite conveniently, as there is any quantity of shale and clean gravel all through the park.

Drift wood on the Miette during high water gave us considerable trouble, but that is to be expected in all these mountain torrents. The bridges above referred to are completed, having been raised four feet, as an additional safeguard, to prevent the possibility of danger from driftwood causing jams in the near future.

As Dr. Mitchell's party of over twenty were to arrive in camp on Teck island. Pyramid lake, early in July, it became necessary to proceed with the immediate construction of the permanent road to that lake. With the able assistance and advice of the chief superintendent, a road was surveyed along the hillside on the west side of the town of Jasper to Pyramid plain, with a $2\frac{1}{2}$ per cent grade throughout. After crossing the Cottonwood creek at its source, we were able to lay out the balance of the road on an equally good grade, by taking advantage of numerous draws (valleys) which finally debouched on the shore of lake Patricia, an exceedingly beautiful sea green lake about $1\frac{1}{2}$ miles long; then, skirting the south east shore for about 500 yards. the road circles the north end of the lake, and follows the sandy beach of Pyramid lake to the apex of this horse-shoe lake at a point opposite Teck island. This road over four miles long, has only cost \$5,650, which is cheap considering the rock cutting and the amount of heavy side hill cutting involved. It furnishes a most beautiful and interesting drive from Jasper to these mountain lakes, which it is expected will become the site of many beautiful summer residences during the coming season. The Surveyor General has very kindly given the services of Mr. Matheson, D.L.S., to lay out 150 lots for this purpose, in addition to surveying the townsite of Jasper.

Since the completion of these two important and necessary surveys, Mr. Matheson has been detailed to commence the topographical survey of a large area in and around Jasper, a work of absolute necessity, which will assist us very much in the development and location of the many striking and uncommon beauty spots in this vicinity. He has completed the Corral block, styled "A", as an addition to Jasper townsite. also the Cabin lake district from which our water supply is drawn. From the latter data have been gained that will be most useful in the preparation of a permanent scheme for the water supply of the rapidly growing townsite of Jasper, and the acting engineer is now taking soundings of Cabin lake to estimate the water supply available there for future use.

The Miette Hot Springs trail, the next in importance, proved a heavy task, as the Cobb trail was found to be laid out seemingly with a view only to scenic effect, and its difficulties made the trip prohibitive for the many invalids who now and in the future will wish to use it. After considerable reconnaissance work a number of diversions along Fiddle creek were decided upon, lessening the grade, generally making condition much safer, and shortening the trip from Pocahontas by about $1\frac{1}{2}$ hours. During the work, the chief warden, Alex. McDougall, discovered two caves about 3,000 feet up on the Fiddle Creek range, the entrances of which are, respectively, 40 and 60 feet. These will be thoroughly prospected during the coming summer.

In connection with this important work a small gang under Ralph James, J.P. Pocahontas, was detailed to build a trail to the Punch Bowl falls, and succeeded in carrying out the work most satisfactorily, building three most artistic rustic bridges. which very much enhance the beauties of this most interesting freak of nature.

We next explored the several routes to the Malignè Lake country, finally deciding on the Malignè River valley, as possessing the easiest gradients, and opening up the most interesting country, especially three wonderful canyons. The lower one, $3\frac{1}{4}$ miles from the Athabaska, is said to be one of the most wonderful, weird, and interesting in the Rockies. The pot-holes are in a class by themselves, running to a depth



New Administration Building, Jasper Park.



Old Administration Building, Jasper Park.

of nearly 200 feet, the river finally cutting the walls in two, leaving the pot-holes as if split apart,—half on each bank. The trail has been built on lines suitable for conversion to road width in the future, and goes to Medicine lake, about 14 miles from the bank of the Athabaska, on leaving which its course winds around the shores of some beautiful lakes of emerald green and turquoise blue. Three permanent bridges were put in, and during the coming summer it will be necessary to erect solid but rustic foot bridges at vantage points over the canyon, and rail (with iron) the walls of the canyon, as the pitch-off is extremely abrupt and dangerous.

From Medicine lake the Forestry branch have cleared of windfalls a trail to Jack lake,—the best fishing lake in or near the park as far as known,—and, during 1914, a good trail should be cut up the Rocky river, to that lake, which would open up to tourists the canyon of the Rocky, estimated to be 300 feet deep, and make more accessible the best hunting country in the district, situated at the headwaters of the Brazeau. Pony trails were cut up both banks of the Athabaska to Buffalo prairie: the one on the west bank is an excellent one, only requiring a bridge over the Geikie creek to complete it.

There was also cut out by Warden J. A. Rootes, and graded, a good trail to Caledonia lake, an excellent fishing point. This trail starts two miles west of Jasper. The trail to Cabin lake, about $1\frac{1}{2}$ miles, was cleared up, and the Stoney River trail, over 14 miles from the Athabaska at the lower end of Jasper lake, was cut out by Wardens Busby and McDonald, with one man. This enabled the engineers of the Water-power Branch to reach, report on, and photograph these beautiful falls, and also opened up a good game country.

The old park buildings at Jasper being unsuitable, and too far away for economical management, your approval was granted to proceed with the construction of an administration building and official residence combined. The services of Mr. Calderon, F.R.A.I.C., were secured as architect in charge. He prepared the plans of a boulder bungalow which is now completed, and is, I consider, a credit to the department in design and construction. Day labour was employed with great success, as, owing to the decrease in building operations in the West, we were able to secure the best class of men. Mr. Frank Macdonald was placed in charge as general foreman. He proved a treasure, having a general knowledge of all trades, and possessing, in addition, artistic taste in construction work. The great success achieved is largely owing to his efforts.

A Government stable and corral of concrete were also designed, with buildings for stores, carpenter and blacksmith shops. The stable is now almost ready for occupation. It is rustic in design, with pebbled concrete lower storey, the upper finished with greased logs with crossed corners, and is placed on a new subdivision about 600 yards west of the railway station, Block "A." It was decided to debar from the townsite all stables with their attendant smells and flies, and this slope at the foot of the hills back of the town was, therefore, chosen for a corral area. This has been surveyed by Mr. Matheson into six corral sites, the south lot of two acres for the Government. Facing Elm avenue, in the centre of the townsite, and adjoining it to the north, are one-acre sites for packers and outfitters. Messrs. Otto Brothers have applied for the one adjoining the Government site; next comes "Curley" Donald Phillips, and Messrs. Brewster and Moore have already commenced their stables and corral on the northerly area, which is to be on the lines of old Fort David Thompson of the Hudson's Bay Company, and will be a decided acquisition to the beauty of the townsite.

Messrs. Otto Brothers are also preparing plans for a similar building, conforming to a request for a rustic style of architecture, "either logs or boulders," which has uniformly been the aim in all buildings under construction or to be built. This will result, in after years, in our having a harmonious and appropriate appearance in the class of buildings, of which the Administration building, now nearly completed, will certainly be the leader.

This Administration building, constructed of boulders and concrete, is about 64 feet by 42 feet, of the bungalow type. The rafters are of peeled round timber, the ends projecting six inches beyond the eaves of the roof and verandahs, lightening up the appearance, weight and size of the same.

REFUGE BUNGALOWS.

It is considered absolutely necessary that a comprehensive scheme of refuge bungalows be built, about 5 miles apart, on most of the important trails throughout the park, thus affording comfortable places of refuge to tourists sojourning in the park, and also popularizing the outdoor life which will do so much to upbuild a healthy and virile race.

I have recommended a low bungalow type, 20 feet deep and 35 feet long, to cost \$500 each, with cooking range installed for public use. These buildings would afford accommodation for ladies at one end, and men at the other, with a living room in the centre, and in time we should construct a boulder and concrete chimney with fire-places.

GAME AND FISH.

It is gratifying to note the increase of big game and bird life within the park, as well as the effect of close supervision and protection in the lack of fear shown by



Rocky Mountain Sheep—Wild—Jasper Park.

them. A large herd of Big Horn are continually seen at close range on the west side of the Maligne range about seven miles from Jasper near Buffalo prairie, and another of 27 is daily seen on the southwestern slope of Roche Miette. Others are seen on the Moose and Stoney rivers, and numbers of bear of all kinds are reported in different parts of the park. Large numbers of white and black-tail deer are reported, and a most gratifying increase of beaver (lodge and bank), and mink are to be found, especially on the Miette river.

Tourists visiting Jasper have had some most enjoyable outings at Pyramid and Caledonia lakes, and excellent catches of large lake trout, *Salvelinus Namaycush*, and rainbow trout have been made, and visitors to Jack lake, that interesting lake on the Rocky river, have made such catches of Dolly Varden trout as to make one feel that this lake is possibly one of the best stocked in the mountains.

Wolves,—timber and coyote—are unfortunately increasing also, and I purpose inaugurating a definite policy of trying to lessen this evil. In this connection, I would suggest that our wardens be permitted to retain the bounty and also the hide of all wolves destroyed by them, as an extra inducement to persevere in trying to destroy them.

SCENIC FEATURES.

The limitations of this report will not permit of a detailed description of the many scenic features and wonders of Jasper park, but I would briefly refer to a few, starting along the Grand Trunk Pacific Railway from the easterly entrance at Dyke, photographs of the majority of which have already been sent to head office.

Roche Perdrix on the east bank of Fiddle creek, is unique in its stratification, and overlooks a most beautiful park-like area which has been suggested as the site of the Grand Trunk Pacific hotel, to accommodate the many tourists who will wish to use the wonderful healing waters of the Miette Hot Springs. Four miles west Poca-hontas is reached; here a trail, three thousand feet long, has been constructed to reach the Punch Bowl falls, which have been pronounced by many exquisitely beautiful and unique. Three rustic bridges add, if possible, to the beauty of the falls.

The Miette Hot springs have been pretty thoroughly explored, and made easily accessible by pony trail by many necessary diversions of the Old Cobb trail, and a series of four beautiful falls was discovered in an area three miles south of the springs. These springs range from $101\frac{1}{2}$ degrees to $128\frac{1}{2}$ degrees Fahrenheit, and many wonderful cures of rheumatism have been reported. The bathing pools are circular in form, and are said to date from the days of the Hudson's Bay company. They were made from boulders and sulphur rock chinked with moss.

Roche Miette, one of the most striking mountain features of the park, overlooks Poca-hontas, and I would recommend that, during 1914, we should construct a trail, refuge hut, and telephone service to its top, serving the dual purpose of a tourist attraction, and a most excellent lookout for fire purposes.

The Rocky river, about four miles to the west, has a wonderful canyon, about 300 feet in depth, with many striking features. After passing the Rocky river, there is seen, on clear mornings until about eleven o'clock, the gigantic figure of a man standing against Pyramid Mountain, which I have called "The Sentinel." It is most striking against the field of snow that remains all the year round on the northeast side of that mountain, 9,070 feet high.

At Mile 1012, Grand Trunk Pacific Railway, four mineral springs have been located, and gallon samples sent you by express for analysis; there are three sulphur springs, and one cold lithia spring. Opposite Mile 1023, the Maligne river rushes through the Maligne canyon, where the scientist and tourist may find the most wonderful erosions within the park; the pot holes being most marvellous in size and number. A good trail, virtually a road, renders easy access to this point, and to Medicine lakes. en route to Maligne lake. At a point three miles from Jasper near the Maligne canyon, a side trail has been built, to the top of the northeast end of the Maligne range 7,500 feet altitude, for tourist and fire purposes. In a park-like flat on the east bank of the Athabaska, below the northeast end of the Maligne river nestle five most exquisitely beautiful mountain lakes; from east to west they are,—lakes Edith, Morley, Round, Fish and Beauvert. The colours of these lakes are unusually brilliant. lake Edith a blue-green, Beauvert an indescribably vivid green. This whole area will offer wonderful opportunity to the landscape artist, in its future development as a site for summer homes. From this lakeview park is to be seen the "old man of the mountains" on the Colin range. This profile, at an altitude of over 8,000 feet, shows a recumbent figure, the head fully one-half mile in length, the face gazing skyward, and the body stretching south to the Maligne canyon. This, situated above the tree and



Photo by E. E. D. Wilson.
Fiddle Creek Canyon, Jasper Park.



Lower End of Maligne Canyon, Jasper Park.

earth line, is said by Professor Osborne to be a most interesting geological freak—a large earth covered mountain top which has survived the erosion of time. On the hottest summer days, looking up the valley of the Maligne, there is sometimes seen Maligne mountain, said to be over twenty-five miles away, shrouded in snow from the tip of its pyramidal-shaped summit, in decided contrast to the remainder of the Colin range in its weather worn grey of limestone.

On reaching Jasper, there opens to the eye some of the grandeur of the valley of the Athabaska, with its myriad mountain tops of varied shapes and altitudes. Almost square in the centre of the valley to the south, Mt. Hardisty rises in massive grandeur: a huge glacier on the northeast peak lightens up the effect of its solid mass, and on some summer evenings, from nine to ten-thirty, this glacier seems to be partially veiled in a delicate pink. The “king” of the mountains in this district, Geikie, walls off the west side of the valley, towering 10,400 feet towards the sky. Snow and ice-clad all the year round, a hanging glacier clings transversely across its face from south to north, and on its western end is a huge glacier, ending in a dark pine covered valley, furnishing a rushing torrent that feeds into the Athabaska. A. L. Mumm, the celebrated mountain climber, spent nearly six weeks, in 1913, trying to conquer Geikie, but was compelled to give up the task when about 400 feet from the top, owing to the severe cold and high winds encountered, though the attempt was made during August and early in September. Mr. Mumm states that about one hundred mountain tops, worthy of the name, can be counted in the valley of the Athabaska, from either Geikie or Hardisty,—a panorama unexcelled in the Rockies.

A new and beautiful lake was discovered by Warden Bigley, which I have called “Summit” lake, as it is on the divide between Alberta and British Columbia, with one stream flowing eastward to the Miette and another westward to the Fraser river. This lake is swarming with beaver, which have a number of lodges around the lake shore. Bigley cut a trail between one-half and three-quarters of a mile long to this lake, at a point half a mile east of the summit, and it is intended to make a report on the fishing possibilities of the district during 1914.

Four and a half miles northeast of Jasper, rises in its vari-coloured majesty. Pyramid mountain, 9,070 feet high, and nestling at its foot is Pyramid lake, an exquisitely coloured lake, horseshoe in shape, with a beautiful island at the bend of the shoe. An excellent road has been built to this lake, passing beautiful lake Patricia on the way, and on the shores of these lakes are surveyed 150 lots for summer residences, the greater number of which have already been applied for.

Between Jasper and the Snaring river there rise pre-eminent, two palisades of enormous height. These have perfectly horizontal strata of slaty shale, the erosion on their faces leaving some fantastic shapes. One in particular I have called “Totem rock,” as at one angle of view it is shaped like a Siwash totem pole. Thence, travelling northeast from Jasper on the Canadian Northern railway, one is struck with the magnificence of the three enormous buttresses jutting out in the valley of the Snaring, from the southwest side. These I have named the “Sons of Anak.” Proceeding northeast, we find Roche de Smet, with its twisted contortions of stratification, of scientific as well as scenic interest. Thence we come to the valley of the Stoney river, 14 miles up which are found the beautiful falls of that river. This fall is 60 feet high, and about 40 feet wide. The rushing torrent of glacial water pours through a beautiful and interesting canyon, and one photograph shows most weird figures and faces, which will prove a source of great attraction to tourists for all time.

The valley of the Moose river is wide and beautiful, and offers good grazing all the year round. Then comes Bull Rush mountain, twisted and tortured in its stratification. Legendary lore says the name arose from an incident, which occurred a century ago, when a Stoney Indian chased a huge buffalo bull around this mountain, until it attacked, and finally killed him. At its southwest corner, in a rocky bluff jut-



Ogre Canyon, Jasper Park.

ting into Brulé lake, is found a small but most striking canyon which I have called the "Ogre canyon," as from one viewpoint an enormous head with mouth outstretched seems trying to take a bite out of a large rock on the opposite side.

TREE PLANTING IN JASPER TOWNSITE.

The general question of tree planting, to beautify the streets of Jasper, opens up a field that seems to call for expert advice as to what trees, not indigenous to the locality, might be planted with a fair chance of successful growth. At present we have virtually only Douglas fir, jackpine, poplar, cottonwood, spruce and black willow.

WILD LIFE.

There is much room for us to improve the conditions of aquatic bird life within the park, by a definite plan of wild rice planting, thus providing a favourite food for ducks, geese and swans.

CAPERCAILZIE AND PHEASANTS.

In view of the generally mild and open winters prevailing in Jasper park, it would appear that we should procure some birds of these and other varieties, to ascertain if we can successfully acclimatize them, and thus increase the attractions of our bird life.

HUMANITARIAN IDEALS.

The Canadian parks, I believe, possess vast potentialities for the betterment of the Canadian people in body, mind, and resultant energy and activity, and each year, as their attractions become better known, they will undoubtedly draw increasingly larger numbers to share in the benefits of the out-of-door life. These will return to "pass on the good word" that, in the parks, a cottage site may be obtained for such a small annual rental as to place it within the reach of the humblest citizen. In this connection, there would appear to be a wonderful field offered to this country, with its increasing wealth and progress, to assist some of our suffering poor to have an opportunity of being restored to health, by freeing them, for a short time at least, from the sordid and unsanitary surroundings in which they live, which lead oftentimes not only to ill health, but to its attendant evils of vice and crime. Suitable areas for the care of tubercular and other communicable diseases could at small cost be prepared for the housing of persons suffering from such, in localities that would not interfere with the ordinary tourist attractions, as *sanitaria* should never be established near points of unusual scenic attraction.

Jasper park has many such attractive points where a reasonable altitude, perfect water, pine clad hills, and a delightful climate would restore to health and activity many who would otherwise pass quickly over the Divide, and every life thus saved and restored to health means an added asset to Canada.

WARDENS' AREAS.

Jasper park, from its lateral divisions, by streams running into the Athabaska in every case almost at right angles thereto, offers ten natural areas, each of over 100 square miles, which is the utmost area that a warden could be expected to supervise for fire and game protection. This would entail an addition of four wardens to our staff, which is strongly recommended as being absolutely necessary.

ENLARGEMENT.

One of the most important questions in connection with Jasper park is that of the enlargement of its area, and I cannot too strongly emphasize the necessity for immediate steps being taken towards the carrying out of its enlargement as follows:—

(1.) To the north and west there is most interesting country, especially towards the corner of Mt. Robson. This area is scenic, as well as necessary for the protection of big-game, and the limit of the park should be extended to the eastward, on a line of natural boundaries that would embrace the headquarters of the Solomon and Stoney creeks. There is an old trail to Robson from both of these streams, which could easily be restored.

(2.) A large portion of the area at the head waters of the Brazeau is most striking in its scenic beauties, and is recognized as the best big-game country in the Rockies. A line is suggested, also on naturally defined boundaries, that would take in all the Maligne lake area from the Brazeau, and the wonderful mountain panorama of the Athabaska to its source. This should include Mt. Geikie, the unconquered monarch of the Rockies, which lies on the divide between Alberta and British Columbia, and is such an outstanding feature from Jasper townsite. By taking in this area to the south, we should preserve the location of what may be one of the most wonderful motor roads in the world,—that which it has been proposed should be constructed to connect Laggan with Jasper. This road would pass over the back of the continent, and open up unrivalled scenery all along its route.

In conclusion, I wish to say that the railways operating in Jasper park during the past year have co-operated with me most willingly, and, in every case in which I have sought their assistance, have been willing to aid in the development and protection work of the park.

My sincere thanks are also due to head office staff, and that of the Chief Superintendent for their willingness, at all times, to assist me in my new field of labour, as without this I should have found my new duties too onerous to carry out properly.

I have the honour to be, Sir,

Your obedient servant,

S. MAYNARD ROGERS, Lt. Col., R.O., J.P.

Superintendent of Jasper Park.

APPENDIX No. 8.

ST. LAWRENCE ISLANDS PARK.

The work in connection with these island parks consisted mainly in repairing the wharfs on some of the islands and the painting of the pavilions. The wharfs repaired were on Stovin, Georgina, and Gordon islands. In all these cases the entire covering had become decayed and unsafe, necessitating new timber for the top layers of the frame work and a new covering. These were all repaired with best seasoned pine, all squared timber used being 8 inches by 8 inches in dimensions. The pavilions were all painted white, the roof and trimmings green. In addition to this, flag poles were put up beside each pavilion. Many sundry repairs were executed, and on some of the islands, where the brush and undergrowth was particularly thick, considerable clearing was done.

These parks are small reservations, consisting of twelve islands, or parts of islands, and a portion of the mainland containing approximately four acres, mostly situated between the towns of Brockville and Gananoque on the St. Lawrence river. Eleven of these islands were purchased by this department from the Mississauga band of Alnwick Indians. Nearly all the many beautiful islands which constitute the famous St. Lawrence Thousand islands, and which can easily be called some of the most beautiful and most popular summer resorts in Canada, are privately owned and occupied. One need, therefore, only take a trip through this part of the river to realize and appreciate the action of the government in taking over these lands, and turning them into public parks, where the hundreds of campers and picnickers, who visit each of them during the summer, can enjoy the pleasure of an outing on the St. Lawrence river and the surrounding lakes.

The parks are administered direct from the Dominion Parks branch at Ottawa. Each island park, or group of islands, as the case may be, has a caretaker, who enforces the necessary regulations for the protection of the park, and who is directly responsible for its up-keep. All information in connection with the islands may be obtained from him, as well as the necessary permits to camp for any definite period. The islands have all been partially cleared, and have been provided with wharfs suitable for skiffs or launches. Nearly all of the larger islands have a pavilion, and on some of the larger there are two. These pavilions are octagonal in shape, and are large enough to accommodate several large picnic tables and benches. Each pavilion is supplied with a number of tables, benches, and camp stoves. These stoves are made of stone and concrete, and have an ordinary iron stove covering. They make very serviceable stoves, and supply all the conveniences necessary for a picnic party or campers. In addition to this, some of the islands are provided with rustic seats, which add considerably to their comfort and appearance. Suitable flag poles having been provided, a Union Jack is always in evidence during the summer. The islands are designated by large sign boards, upon which is written, "Dominion Public Lands," with the respective number of each island.

A list of the islands, with their approximate size and location, and a description of each is as follows:—

STOVIN ISLAND, OR PUBLIC LANDS NO. 8.

This park is situated about two and one-half miles west of the town of Brockville, and contains an area of approximately five acres. It is commonly known in the vicinity of Brockville as "Picnic Island." It has evidently been given this name owing to its suitability for picnics, and the number of picnics held thereon. This island is mostly shaded with evergreens. It has been nicely cleared, and has two pavilions, five stoves, four closets, besides several tables, benches, and rustic camp chairs. It has a large wharf, at which some of the picnic and excursion boats call, and a small skiff wharf.

Mr. J. Timleck, 112 Water street west, Brockville, is caretaker in charge of this island.

MALLORYTOWN LANDING AND ADELAIDE ISLAND, OR DOMINION PUBLIC LANDS NOS. 6 AND 7.

Mallorytown landing is a portion of the mainland on the left bank of the St. Lawrence river, about one and one-half miles south of the village of Mallorytown. It has the advantage of being accessible both from the mainland, and from the river. This parcel contains approximately four acres, and was presented by a private individual to the Dominion Government to be used as a public park. The fact of its being on the mainland makes it a very popular resort for campers and picnickers from the many places in the surrounding district. This park has been provided with numerous



Among the Thousand Islands, St. Lawrence Islands Park.



Stovin Island, showing Pavilion, St. Lawrence Islands Park.

tie-posts and accommodation for horses. It has one pavilion, one stove, four closets, one skiff wharf and one launch wharf. The pavilion is situated on a picturesque rocky bluff at the river front, on which is also the skiff wharf, and steam boat or launch wharf. This wharf is a regular stopping place for one of the river freight and passenger boats. The rocky bluff is joined to the mainland by a narrow piece of marsh land. The latter has been converted into a roadway and path about 300 feet long, thus allowing the people to drive to the pavilion and wharf. The front portion of this park is cleared, and has very few trees; the rear of the park is nicely shaded with large oak and maple trees, thus making it admirably suited for picnic grounds.

Adelaide island is situated about one and one-half miles south of Mallorytown landing, and immediately east of the foot of Grenadier island. It contains eleven acres, but most of the island is comparatively low, and the river on three sides of it is somewhat marshy. It is therefore, not much used for park purposes.

Mr. R. J. Haffie, whose home is about one-half mile from Mallorytown landing, is caretaker of these parks.

GRENADIER ISLAND OR PUBLIC LANDS NO. 5.

This park consists of the western portion, or head, of Grenadier island, and contains an area of approximately five and one-tenth acres. It is situated about one-half mile east of Rockport. In this park are a pavilion, two stoves, two closets, with a number of tables and benches, etc. There is one large wharf on the west side of the island. Nearly all the brush and undergrowth have been cleared from this park, forming an open grove of fine shade trees. Owing to its high elevation in places, there is an excellent view up the river, overlooking all the many different islands in the immediate vicinity. It is very convenient for camping, as all kinds of dairy and vegetable products can be obtained from the farmers on the island.

Mr. Delbert Root, whose home is on the island and adjacent to the reservation, is the caretaker.

GEORGINA AND CONSTANCE ISLANDS OR DOMINION PUBLIC LANDS NO. 3: Near Ivy Lea and immediately opposite Echo Lodge.

Georgina island has an area of twenty-three acres, and Constance of seven acres. No improvements have been made on Constance island, as these islands are situated beside one another, and up to the present the one is large enough to accommodate all the visitors at this point. Georgina is commonly known in the vicinity as "Deer island." It is very rough, and is covered with a heavy growth of timber with a considerable underbrush. It has two pavilions, one at each end, with the necessary stoves, closets, tables, etc. Only a small portion of this has been cleared, comprising about an acre around each pavilion. At the western pavilion, there is a large launch wharf, and a skiff wharf, both situated in a sheltered bay. The pavilion is on a high imposing bluff, and affords an excellent view of the river and surrounding islands. South of the pavilion, at the east end of the island, is a small skiff wharf.

Mr. J. G. Wallace, whose home is on one of the islands near these parks, is the caretaker.

GORDON ISLAND, ENDYMION AND CAMELOT ISLANDS, OR PUBLIC LANDS NO. 2:

Gordon island is situated about two miles south east of Gananogue, and contains an area of approximately sixteen acres. Camelot and Endymion are about three miles from Gananogue, south of Gordon island near Grindstone island, and contain an area of twenty-five and ten acres respectively. These latter two islands are little frequented, and have been allowed to remain in a comparatively wild and unimproved condition. There is one stove on each but these are mostly used by fishermen.

Gordon island is one of the prettiest of the Government Island parks, and is covered with some very fine timber including oak, butternut and chestnut. The pavillion is situated on the eastern end of the island, which has been nicely cleared of all small trees and brush. It has a very imposing and attractive position and affords one of the best views along the river. There is a good launch wharf, as well as a skiff wharf, in full view from the main channel of the river.

Mr. Thomas Glover of Gananoque, is the caretaker in charge of these islands.

BEAU RIVAGE ISLAND OR PUBLIC LANDS No. 1: This island is situated about two miles southwest of Gananoque. It contains an area of about twelve acres. This is one of the most popular islands in this vicinity, and is greatly used by the people of Gananoque and the surrounding districts. The island has numerous shade trees, but there is a general scarcity of wood for fuel, which is so easily obtained on the other islands. The island is provided with one pavilion, four stoves, two closets, tables, benches, etc., as well as one large wharf and a skiff wharf. One of its great attractions is a small bay, with water ranging in depth from two to three feet, thus affording an ideal bathing place for children.

Mr. A. E. Meggs, of Gananoque, is the caretaker.

AUBREY AND MERMAID ISLANDS OR PUBLIC LANDS No. 9: These islands comprise an area of fifteen acres and four acres respectively. They are situated near one another, and about two and one half miles south west of Gananoque.

There are no improvements on Mermaid island, as Aubrey island appears to meet the requirements at this point for the present. Aubrey island is well wooded with oak, hickory and birch. There is a pavilion, two stoves, two closets, tables, benches, etc. As this island is not used so much as the ones nearer Gananoque, one small wharf has been found sufficient.

The caretaker of these islands is Mr. J. A. Acton, of Gananoque.

REPORT OF PROPOSED ARTISTIC LAY-OUT OF BANFF, BY THOS. H. MAWSON.

FOREWORD.

There is probably no department of art more misunderstood than Civic art, which forms the aesthetic side of city planning. It is the "city beautiful" idea (now passed into a hackneyed phrase), which, more than any other factor, is responsible for this misconception. Unfortunately, it has led in many directions to an exaggerated appreciation of what is merely spectacular and ostentatious, combined with prettiness, and thus apparent justification has been claimed for extravagant outlays on works which do not touch the vital necessities of the city, whereas, it is evident that a city must be hygienic and practical before it can be beautiful. A recent writer has stated the case thus, "Civic art is so utilitarian in its purposes as to be civic first and art afterwards, and may be defined as taking, in the right order, those steps which are necessary or proper for the comfort of citizens."

To this, it may be added that a city plan must recognize economic considerations, and, therefore, is not a scheme for the lavish expenditure of huge sums; but rather—for the proper control of that expenditure which under any scheme of development is necessary so as to secure, without waste of money or energy—that convenience and fitting presentment which the city should possess as the expression of its status, its purpose and its location. On the other hand if cities be not predetermined and



On the Way to the Cave and Basin, Banff.



Paradise Creek near Laggan.

planned in advance, the door is left open to the uncontrolled machinations of the speculator, and to every personal whim which is only for the hour, and will grow aimlessly and confusedly, without character or suggestion of purpose.

It is only by taking time by the forelock that we, who live in this mercenary, mechanical age, can hope to build a city which is really worthy. We may be, and ought to be, fine idealists, but before we can accomplish anything we have to prove the practicability of our idealism.

The plans accompanying this report show a serious attempt to do this, and we believe that a full consideration of our proposals will prove that we have succeeded in the attempt.

We are assured that, that which idealizes and inspires ought not to be lacking in the improvement and beautification of Banff. Patience and continuance in well doing, however, are absolutely essential, if the idea is ever to be appreciated, for even a city of the most modest dimensions and character needs a generation for its realization.

BANFF.

ITS INCOMPARABLE NATURAL BEAUTY.

Banff is the most impressive and spectacular portal to the Canadian Rockies. The bold character of the amphitheatre of mountains of which it is the centre, romantic in their varied snow clad outlines, with the endless variety of the bends, the cascades and lakes of the Bow river at their base, the delightful contrast obtained from a comparison of the ruggedness of Nature's architecture with the cultured and cultivated handiwork of man, nestling at the base of the mountains with the aid of the limitless pinewoods to tone down or accentuate the harmonies or contrasts—all combine to impress travellers passing through. Such scenes take the imagination by storm, and call to mind remembrances of an Alpine holiday, or the invigoration of a Norwegian vacation.

Only those who have come under the spell of scenery which is indescribable by words, can realize the largeness of atmosphere and vision which is produced in this region, where nature has conspired to excel herself in the bold and exquisite character of each separate charm. They alone can form any idea of this ideal resort where Mount Rundle, Sulphur and Tunnel mountains lift their snow-capped peaks to such vast heights, emphasising the interlacing chain of peaks and the river surging around their base, placid for miles, then changing suddenly into rapids and majestic-sounding cataracts, rushing madly between sheer precipices, or placidly gliding between tree-fringed banks to repose in the Vermilion lakes, which respond again and reproduce, in soft poetic reflections, the varied forms of mountain, sky, precipice and woods. This in brief is a mere suggestion of the setting of the district which it has been determined to preserve forever in its primal conditions.

The problem now before us is how to open Nature's storehouse and yet not to spoil it; to de'limit and reserve it for those who seek its beauties for its own sake—making every provision for their comfort and convenience, in such a manner that the accommodation provided shall not suffer disparagement in comparison with up-to-date English and Continental mountain resorts.

The prime factor to be safeguarded is that, whatever is done to ensure the convenience and comfort or the amusement of visitors to Banff, it be done in such a manner as will harmonize with the natural surroundings, a contingency which was easy enough to meet in older days as may be seen in the case of of quaint Munich, the gateway to the Bavarian Alps, and other Swiss towns and hamlets. The same may be said of the homely Westmorland towns which nestle in the valleys below the English Lakeland mountains. When they were the homes of unsophisticated shepherds, small

landowners, weavers, carpenters and shopkeepers, they adorned their respective districts and gave a fitting grace to their native mountains, fields and lakes. As an example, take the peaceful village of Grasmere. Before the residents began to find that money is to be made out of the excursionist, mountain climber and visitors, all was harmonious and beautiful. To-day all kinds of ill-considered and inharmonious buildings are erected together with corrugated and boarded shacks to desecrate the classic ground. The necessity of being beforehand in these matters is vital if you are to prevent the commercialization of Banff by speculators whose only object is immediate gain.

As may be seen in scores of the Alpine valleys, Nature and the habitations of man need not be at variance. They can be so contrived as to grace one another. This can be accomplished by the use of various styles of characteristic architecture, but the problem is primarily one of proportion and balance and design, suited to the use of local building material. For this reason alone we are assured that there need be no attempt at Banff to import any of the adventitious picturesqueness of Alpine chalets and chapels, much less anything of the Baroque and Rococo architecture to be seen at Munich.

We would advise therefore, that Banff should be developed as a mountain resort suited to the requirements of those who seek a home where rock climbing may be attempted by the more strenuous, and where those desiring a less arduous pastime may indulge in golf, tennis, fishing, etc., or those most delightful walks and drives which may be obtained in every direction; and where naturalists may be induced to pursue their studies of the fauna and flora of the Canadian Rockies, for which the locality provides such peculiar facilities.

To weave man's handiwork into the natural, not only without harshness or discord, but also with the certainty of enhancing the charm of the unexampled natural features, needs a mind and an experience peculiarly susceptible both to the poetic qualities of nature and the achievements of art, and a genius for pictorial composition. In the first instance the pioneers who allocated Banff among its environs must have had some idea of what was finally possible, but their vision did not extend far enough. We have now, however, arrived at some measure of certainty as to the purpose of the Government: our task is to visualize the full comprehensive proposal, and enthuse others with the prospect thus opened up.

In the design of a town like Banff, there must be no uncertainty of aim such as that which might be permissible in a growing village of small proportion. The situation of Banff between Winnipeg and the sea causes it to be a convenient place at which to break the tedium of a monotonously long journey, and thus a number of visitors will always be ensured; but the problem is first of all how to detain them for a length of time sufficient to benefit the place, and, secondly, how to ensure that they will carry away with them such impressions and pleasant memories of their stay, as shall cause them to wish to repeat their visit, and encourage others to come.

Our own observations led us to the conclusion that, as things are at present, the interest of the best class of tourist is exhausted after a stay of three days or so. This is confirmed by Dr. Brett, who informs us that this is not an unfair estimate. Compare this with the success of the Swiss resorts such as Zermatt, under the shadow of the Matterhorn, St. Moritz, Champéry Davos, and other places, where the best accommodation is bespoke several months in advance for the winter sports, and where the natural attractions are inferior to those at Banff. The explanation is comparatively simple, and it would be well to take a few lessons from the example set. In the first place, the hotel proprietors popularize the accessible climbs, and to some of the summits such as Mount Pilatus they have even constructed funicular railways, a proceeding which I hope you will never allow at Banff. They have a staff of practical mountain guides and teachers of skiing. They make proper bob-sleigh tracks. The meals

are accompanied by an efficient orchestra. The hotels fraternize with other hotels ten and twelve miles distant, and allow their visitors the privilege of taking lunch there free of additional charge, the cost being included "en pension."

In all these resorts it is found that an amplitude of good automobile and driving roads, bridle paths, and walks, does more than anything else to make a district popular. The number of days which a tourist spends in a given neighbourhood corresponds, more or less, to the number of diversified walks or drives to, or past, points of natural interest which they can take. Other factors contribute, but those named are most important, and it seems to us that, if Banff is to become a great centre for a tourist population, it will be necessary to devote the same care to the provision of facilities for exploration, in every direction. Better facilities also for approach by automobile will, in the near future, be a very live question. Already a good commencement has been made and the work will be extended. This will introduce into Banff that class of tourist, which more than anything else, has led to a revival of prosperity in certain small English towns and villages.

Although we would not by any means attempt comparison between Munich and Banff, knowing that the latter is not likely to possess for a century the sanctity of age, nor the mellow and weather-stained stateliness of the former, yet there is much to be learned from the way in which the Germans have supplemented Nature with Art. Only an old city can bear to be overloaded with the numerous art galleries of ancient and modern works such as München possesses. We would not force the flower of art to bloom in a not-too-promising soil, but there is something for emulation in its new National museum, containing an incomparable collection illustrating the history of art and civilization, and in the unique German museum showing the inventions of natural science and technical departments. Although a centre of international traffic, it has continued to be a city of quiet enjoyment and has preserved this special character to a marked degree. In view of its monuments, its beautiful bridges, its parks, and its public life on a great and attractive scale, it may be said to be unrivalled among German cities.

We merely instance Munich, to show how a variety of interest may in time crystallize around what was primarily, a traffic centre and a portal to a picturesque Alpine region of various lesser resorts. At Banff we have to begin with a similar parent seed, which will doubtless take root and grow in a different way, as becomes its native soil, climate and location.

It is possible to have a picturesque "ensemble" within the town, and yet the whole, when viewed from an altitude, or from the near distance, may be a blot on the landscape. All these considerations have been taken into account in the design, by gauging the heights, and the masses in block of the buildings, and the way in which the outskirts of the city are interfused with the tree groupings; thus shall Banff the City be suitably received into the bosom of the grandeur of her surroundings.

BANFF TOWN SITE.

PRESENT AND FUTURE.

Having thus briefly considered some of the axiomatic principles of town and city planning, which bear upon the development of Banff as a pleasure resort, we would now endeavour to show how they are to be applied, and the steps to be taken for the realization of our aims. In order to do this as clearly as possible, we have divided our remarks into two sections, taking, first of all, those relating to the central portion of the area, which we have called "Banff town site" and subsequently considering the more outlying portions under the title of "Banff", and its immediate surroundings.

It is necessary first of all, however, to explain that we do not use the term "town site" in the manner in which it is usually applied in Canada, but in its original or

English sense. By "Banff town site", we mean that area which is more or less occupied by buildings and partly developed at the present time, and which lies between the Canadian Pacific Railway tracks on the north, the Bow river on the west and south, and Tunnel mountain on the east.

The following is a list of the principal drawings illustrating our proposals and submitted herewith:—

- (1) General plan of the Townsite. (sent from Vancouver office.)
- (2) Detailed plan of the Governmental centre.
- (3) Architectural details of the Railway station.
- (4) The bridges and museum.
- (5) Elevations of the last.
- (6) Perspective view of Banff avenue, looking towards the bridge.
- (7) A second perspective view, looking along Banff avenue in the opposite direction to the last.
- (8) Entrance lodges and approach to Corkscrew drive.
- (9) Entrance to the cemetery showing the Chapel.
- (10) Elevation of pavilion to Recreation ground.
- (11) Entrance to the Zoölogical gardens, showing the attendant's houses.
- (12) Subdivision plans, (sent from Vancouver office).

Whether by design or accident, or a combination of both, the location and the present layout of Banff, though by no means ideal, is still better than that of any city (or the beginning of a city) which I have seen in Canada. Not only has the chess-board layout, which in most American cities oppresses one with its insistent monotony, every justification here, but the business centre has been rightly located in relation to its inevitable lines of growth.

The railway station of the Canadian Pacific Railway is conveniently placed, at a point from which the traffic can most readily radiate and distribute itself, without congestion in any direction. Again, the more important sections of the town bear some relation to the contours of the site and the bend of the river, the banks of which are preserved to the public. Its roads are of varying widths to meet the probable volume of traffic, and the whole site permits of perfect drainage, and the provision, under economic conditions, of all other utilities, whether of water, light, or power.

Notwithstanding all that is so favourable, however, it is abundantly clear that the town has reached that stage of its progress which demands a full consideration of all the factors and problems, many of them entirely new, and which were never dreamt of by the surveyor responsible for the original plan.

In a city controlled by, and partly built by, the State, every feature ought to attain to a high-class standard, and, as such, calculated to enhance the pleasant holiday of visitors.

Erections which may be in scale and harmony with a village, may, if introduced into a larger city, suggest meanness and grudging necessity. The larger the city, the more urgent does control of its growth become. Moreover, the growth of a city calls into existence a number of public and semi-public buildings, including religious and educational establishments, which, if reciprocally grouped, lend to it stateliness and dignity; whilst, if scattered and detached, they not only fail to create any lasting impression, but also suggest a lack of civic pride and beneficent government. In Banff the problem is not that of the city, nor on the other hand that of a village, it must possess some of the characteristics of each, and yet, in its general treatment, emphasize the expression which every holiday centre should wear.

Assuming that the residential population of Banff will, in ten years' time, have reached 5,000, with an additional tourist population of 2,000 in winter, and 5,000 in

summer, exclusive of emergency crowds who merely come to witness the sports; assuming also that the district continues to be under the management of the Parks Branch of the Department of the Interior, the following buildings, in addition to the Canadian Pacific Railway hotel, and all capable of lending architectural character, would be needed:—

- New bridges.
- Administration offices for the Superintendent Engineer and staff.
- Halls and courts.
- Museum of the natural history of the Rockies.
- Museum, library and club for field naturalists.
- New railway station with a possible layout of Canadian Pacific Railway workmen's houses.
- Churches and church halls.
- Picture shows.
- Mortuary chapel and cemetery with entrance gates.
- Post office.
- Banks.
- Club pavilion, and other park buildings, in the recreation park.
- Boathouses on the Bow river.
- A new Hotel "Rundle."
- Greatly improved shops and other business premises, bordering both sides of Banff avenue.

Here are a sufficient number of important units to give character and distinction to any small town, if only each is carefully thought out in relation to its site and surroundings, and it is the possibility of a fine reciprocal grouping which gives to Banff its unique opportunity.

Having regard to the probable limit of population, it is in Banff avenue that we find the crowning opportunity for the creation of a fine and distinctive architectural composition. Its length from, and including, the bridge, and measuring from the façade of the "Chateau Rundle" to the circle from which the principal arterial roads radiate, is 3,250 feet, and the width between the building lines is 100 feet. Subject to control of building heights, this gives quite ideal proportions for a really fine street perspective, with unique opportunities for creating, at each end, a building worthy of the vista it would close, and the focal point it would make.

As to the attainment of these terminal features, you have already decided to build a new bridge at the south end of Banff avenue, and we learn from Dr. Brett that it is proposed to erect a new "Chateau Rundle," which will be worthy of its unique position. Thus, without any additional expenditure, you have the beginning of a splendid architectural composition, which will very fittingly fall into its natural setting of river and mountain.

Looking ahead, however, one realizes that the present Government offices, Museum and Zoölogical gardens, cannot meet the needs of a developed Banff. In the case of the latter, the animals should be housed under better conditions, and where they will not prove a nuisance to residents. This site is, however, an ideal one for a Museum and Field Naturalists' club, being most convenient to all the important hotels. It is not ideal, however, for the Government offices, which should for purposes of more efficient control, be placed in a position which is more or less the geographical centre of the town site, near to the railway sidings and necessary storeyards, and at the junction of several important roads.

For this reason, we advise that when the occasion arises, the two sites flanking the approach to the bridge should be developed as a well connected Museum and Club, where naturalists may find, in properly arranged form, the materials for study, especially for the study of the vegetable and animal life of the district, and that the Zoölogical gardens be removed to the position shown on our plan.

Drawings Nos. 4, 5 and 6 show our suggested treatment for this simple group of buildings. The style is such as, in our opinion, would suitably fall in with the surrounding landscape, and, at the same time, give character and individuality to the accommodation provided; it is not more than will be necessary for the effective housing of your growing collection, and proper facilities for its study.

The floor area provided in each of the buildings is roughly 11,925 feet superficial, but, in addition to this, there may be 4,725 feet in the basement, with a well-lighted elevation to the river. This could be used for exhibition purposes, stores, or workshops for taxidermists, and the mounting and arrangement of collected specimens, botanical, etymological, etc., etc. The aesthetic value of these two buildings, and the suggested church buildings, is considerable, as they provide the proper supports to the bridge, lending an importance to this feature which could not be gained by any other means. Incidentally also, the two circular turrets complete the axial lines of the two radial roads right and left of the "Chateau Rundle."

At the north end of Banff avenue, we found it would be quite possible to form a central open space which would unite the *axes* of several important roads, and this without incurring great cost or the re-acquisition of properties, little more in fact than the Revelstoke saw-mills property, for which a more suitable location could be provided nearer the railway tracks. The open space thus provided worthily terminates Banff avenue, and unites it with what I would call "Banff Avenue Radial." It also unites with Elk street east, which gives the quickest access to the Canadian Pacific Railway station, and Elk street west which connects with an important residential area. We have also laid out a new radial road which connects directly with the proposed recreation ground. Thus, this open space also becomes the most important traffic centre; indeed, half of the town traffic would pass through it, and, for this reason, it is an ideal location for the Government offices, post office, banks and other semi-public buildings.

Although we have worked out our scheme for this centre in considerable detail, we expect that modifications may be necessary, to meet the special needs of the town, and our real object is to show that, whatever is done, the architectural units surrounding it should harmonize in scale.

The buildings suggested for this centre, as shown in drawing No. 2, are as follows:—

Town offices with floor space of	15,000 feet.
Two bank building offices, each with	14,600 "
Post office—floor space	12,500 "
Block of shops and offices	10,150 "

Facing into Wolf street, and backing on to the two banks, we have suggested two suites of shops and two suites of offices, or the whole could be converted into shops with offices or workshops over. This would satisfactorily complete the architectural effect over this area.

On the opposite side of Wolf street we have suggested two schools, both equidistant from Banff avenue. Open spaces for playgrounds are provided, which give access to private streets and streets along which there is little vehicular traffic, which is of course a most important point in the site planning of schools. A laboratory and janitor's house are provided, and the arrangement would allow of reasonable extension. The object is to secure model schools for your model town. Accommodation is provided for 480 scholars in each school.

Although you can, with ease, control each end of Banff avenue, and arrive by degrees at a fine and consonant effect without loss or disturbance of existing rights, you will not find it so easy to achieve your purpose in respect to the shops which flank either side of the avenue itself, as, unfortunately, a number of shops of permanent fire-proof construction have already been erected. In respect to the wooden construction, however, you would surely adopt by-laws or ordinances compelling the owners, when

rebuilding, to conform to your plans as to alignment, height of façade and materials to be used, leaving to each owner the planning and precise interpretation of his architectural preferences. This may appear a risk where you are seeking to gain a composite architectural treatment, but in practice it is usually found that, when a street has been designed as a whole, each owner endeavours to make his unit harmonize with the *tout ensemble*. It should be accepted as a truism that, however good the designs in general may be, something more is needed to give the distinctive local note.

Our view is, that it is of the utmost importance to arrive at a treatment as to materials of your buildings, which will give to Banff such a distinctive character. This can best be assured by using local stone and building materials. It is this use of local building stone, (very much like your own), which gives to the English lake district its distinctive charm. It is the same care exercised in the use of local materials which gives character to many a Swiss and Italian village. In Banff there is no need for the introduction of exotic modes of building; there is, on the other hand, every reason why local character should be sought and perpetuated, and the Canadian Pacific Railway, in their later additions to their fine hotel, have recognized this fact with great success.

It will be noticed that, in thus dealing at length with Banff avenue and the treatment of its terminals, we have said little about the bridge. This is because we believe your architect, Mr. Frank Simon, to whom we sent preliminary plans, is in entire sympathy with the ideals here expressed, and that, in his completed designs, even though based on the principle of reinforced construction, he will show an exterior executed in local stone. We may add, however, that there is no unit of the city plan, the right interpretation of which so completely makes or mars a city. Many of the cities of the old world claim a fine bridge which more than anything else fosters a sense of civic pride, while, on the contrary much of the depressing ugliness of many modern cities comes from badly planned ones. The solution of your bridge proposition is certain to add dignity to the whole scheme of design, or else detract from it.

Having satisfactorily as we think solved the problem of creating a worthy centre for Banff, in which the aesthetic qualities are the natural compliment to a well devised system for the distribution of traffic, we wish to refer to another factor which may claim to be as equally important. This is the Canadian Pacific Railway station, and its immediate surroundings.

We understood from Mr. Harkin, the commissioner of Dominion Parks, that we might anticipate sympathetic co-operation from this great railway company, and that he would be prepared to submit to them any plans, suggestions or criticisms we might consider advisable. With this assurance, and feeling the supreme importance of creating the right "first impressions" recognizing also that the railway station is today the really important portal entrance to any town or city, we have not only laid out a radial system of boulevards connecting with the station, but we have suggested a more worthy treatment of the station itself, subdivided the land belonging to the company, suggested a group of cottages for its own workpeople and shown an ample layout for the station place, from which the existing ridiculous cast-iron fountain is of course removed. In connection with this portion of our scheme, we have also advised a freight yard and a location within which builders' yards may be placed.

A cursory examination of our plans will show that the radiation of boulevards from the station makes a perfectly ideal solution of the traffic problems of a small city. For instance, one road connects directly with the town centre, and another with the recreation grounds, thus permitting of vast crowds who come by train reaching this important centre without congesting the other parts of Banff, or introducing a boisterous element to which residents and tourists might object.

Lynx street, though of minor importance to Banff avenue, still contributes to the creation of a model town, and, with slight modifications, would make a perfectly

beautiful avenue. As shown on our plan, it would have the museum at its focal point and therefore gain an added value. Elk street again, after passing through the town centre might, with the exercise of a little control, and perhaps a little encouragement, become a street full of quaint homely character. We only suggest that some building of sufficient architectural dignity should be erected on the site suggested for a church.

It will be abundantly evident, to students of our plans, that ample provision has been made for all sorts of vehicular traffic. We, however, propose to substitute for one of your projected avenues (Riverside avenue), a meandering walk laid out for the use and enjoyment of pedestrians only. This change of plan makes possible an almost continuous riverside walk commencing near the Canadian Pacific Railway station, and extending to a new bridge which it is proposed to erect near Spray falls. It would also connect with the Tunnel mountain or Corkscrew drive. By this arrangement, nearly all the picturesque wooded fringe along the Bow river could be preserved, and the land now devoted to a Zoölogical garden laid out as an interesting rock garden, devoted to the extensive and interesting *flora* of the Canadian Rockies.

The site of your present cemetery would seem to us to be too limited in area for a permanent burial ground. We have, however, carefully noted the possibilities for extension, the area now shown being more than double that reserved at present. It is suggested that some further indication should be given of its purpose, and its maintenance as a burial ground. The location is good, and the soil and sub-soil suitable, and the trees give that quiet restful aspect which should always characterize "God's Acre." It should, however, be suitably enclosed, and an entrance of quiet dignity provided on the centre axis of Buffalo street, and behind this might be added a small mortuary chapel, with a simple spire or belfry which would mark the focal point. Neither the "lych gate" nor mortuary chapel need be expensive structures.

The road up Corkscrew drive has, on the whole, been well devised, as it follows the contours at an easy gradient. For the greater part of its length, it also passes view points of incomparable grandeur, showing that the engineer responsible for the work had carefully studied the best points of vantage before setting it out. It is very evident, however, that economy had to be carefully studied, and a too careful regard for the exchequer has spoilt in places what was intended to be an exceptionally beautiful route in every part.

Entering the drive by the same route as that followed by the coaches, i.e., east of the cemetery, the wide road tails off into a narrow road not much wider than a bridle path. It is suggested that one of the first efforts of the Parks Branch should be to draw a clear line of demarcation between the wide road and the drive, either by the erection of a pair of entrance cottages suitable for woodmen, or by the provision of massive entrance piers built of local stone, but following architectural lines. It seems to us that a pair of stone-built lodges of simple design, such as may be seen at the approaches to some of the sporting domains in Scotland, and occasionally in the Black Forest in Germany would strike the right note, and emphasize the fact that here the visitor was entering a natural reserve.

The road leading to this entrance might be 32 feet in width, divided into two gravelled side walks each 6 2feet wide, and a central roadway of 20 feet. This width, i.e., 20 feet, or two units of traffic, should be the minimum for the Tunnel drive, but, in addition to this, there should be a side walk of at least 4 feet 4 inches, or two pedestrian units on the right hand side, ascending until it reaches the first view point which is opposite Spray falls. This side walk should have a protecting rail, with occasional projections, in which might be placed benches standing clear to the footpath. The position of such seats should be carefully chosen to command good views, and where necessary trees might be removed to open up vistas. There are several acute and dangerous bends in this length, which might be improved sometime by erecting a supporting wall to carry the drive on the south side, and at others by blasting rock on the north side.

At all specially selected view-points there should be a sufficiently large, cleared, levelled and gravelled space to provide room for several vehicles. Incidentally, this would secure a convenient breathing place for horses.

It is important that all such spaces should suggest perfect safety, and this would be best obtained by the erection of a rampart-like retaining wall built of local stone, and carried to a height of 3 feet 6 inches above the gravelled space. Inside this wall there should be a parapet or sidewalk, free from vehicular traffic, and of a width of 4 feet, in addition to a further width of 2 feet for benches.

A "comfort station" on the opposite side of the drive, built in a picturesque manner, (preferably in stone), with caretaker's rooms for use in summer, and a tea-room, would help to popularize this drive for tourists, artists, naturalists and others, if proper control is exercised to prevent their conversion into cheap commodity shops. From this point to the second mile post, near which should be developed another view point, it is suggested that no side walk should be provided, but that in its place a pedestrian path should be constructed at a somewhat lower level as to three-fourth of its length, then gradually ascending until it reaches the second view point. Inspection of the site shows this to be possible for a very small outlay, two or three depressions would have to be crossed, but this could easily be done by a trestle bridge constructed of native peeled fir.

The drive between view points 1 and 2 should be protected on the declivity side by a strong post and rail; and, at several points along the route, a judicious removal of timber to open up views would be advisable, but the location and extent of these thinnings should only be determined on the site by the landscape expert.

The remaining section of the drive is least satisfactory, both as to its line and the number of danger points which mark its course.

The spiral road which undoubtedly appeals to the reckless coach driver should not be permitted, for a serious accident at this point would do much to destroy the popularity of this famous coach drive. The bluff which this spiral is intended to avoid could be blasted away, and a safe road constructed round the side of the hill.

The descent from this point to the junction of the drive with Calgary road is very steep though not very dangerous. Your surveyor has already greatly improved this part by easing acute bends. I suggest that further work should be done by flattening out the curves, and by filling in several depressions on the southwest side of the drive. The exit to this drive should be treated in a similar manner to the entrance, but I have suggested on my plans a new position which secures an improved gradient, and at the same time brings the park entrance into better relationship with the town site.

In addition to those points specially dealt with, there are many other details of considerable interest and importance, which are indicated on the plans and the several elevations and perspective drawings. These suggestions, if adopted, would need to be worked out in greater detail, with possible modifications to meet special needs or circumstances. Compromise is often an essential condition in town planning; but, if the spirit and character of the work are retained, modifications based on economic conditions will generally enhance, rather than destroy, their qualities.

BANFF.

ITS IMMEDIATE SURROUNDINGS.

In the opening chapter, we referred to some of the needs of Banff, which are required in order that it may satisfactorily fulfil its purpose, as the gateway to the Rockies, in attracting and retaining a large number of tourists and residents.

Apart from its glorious location and its great natural advantages, you have already the first necessity in a very luxurious, commodious and well-appointed hotel, owned by the Canadian Pacific Railway Company, whose business it will be to

encourage the flow of tourists to Banff. This hotel is most romantically situated, and, we understand, will soon be surrounded by beautiful gardens and recreation lawns. There are also lesser hotels suited to the needs of tourists.

The remaining task is the provision of reasonable facilities for exploring your great park by constructing additional roads for pedestrians and automobilists, and also bridle paths. It would not be impossible to make, at a reasonable cost, a number of roads, each taking an entirely new route, and opening up new and unexpected beauties in amazing variety. These new roads, especially those laid out for the attraction of automobilists, are so very important, and their exact location in relation to the scenery through which they pass so vital to the interests of the future of Banff, that your department might be well advised to make them the subject of a separate report. We wish, however, to say that our general plan anticipates your favourable consideration of this aspect of development by providing five new bridges, each giving access to a new route, and, at the same time, facilitating the free movement of traffic throughout the district.

The next feature in the scale of importance is the recreation park, occupying the site known as Willow swamps, a water-logged area extending to nearly two hundred acres, which is capable of efficient drainage, as there is a fall of over twelve feet between the swamp and a convenient point along the Bow river. The outlet pipe has already been laid, so there should be no difficulty in dealing with the entire site. Our general plan shows the layout of this interesting park area, which is so large and so admirably situated in relation to the town and the Canadian Pacific Railway station that crowds, however vast, could be easily controlled. Further plans and careful consideration in detail would be necessary before the work of construction could be put into execution; but we wish to emphasise the fact that *here may be laid out the most beautifully expansive and scientifically arranged recreational park in the whole Dominion, and on land which will cost you nothing.*

In close relation to the park scheme, we suggest an area which shall be devoted to winter sports. The dominating feature is the bobsleigh run, which is just a mile in length, with two excellent curves, and a total rise of 800 feet. This is almost equal to the best bobsleigh track in Switzerland, and, indeed, if you wished to beat the best run in the world, you could easily do it; but, for the present, a mile run would meet all demands. As planned, it is intended to carry the sleighway over the bouvelards by simply designed, but strong and artistic bridges, and also to erect at the summit a shelter and starting platform, and at its base a tilted landing platform. As the track should not be used otherwise than for sleighing, the road would be used for hauling up the sleighs, but if the track proved a great success it would pay to erect a funicular railway, such as is used under similar circumstances by the side of some of the tracks in Switzerland. To meet the requirements of experts, the track must be carefully planned with tilted curves. It would, therefore, be advisable to call for detailed drawings before proceeding with the work.

Aquatic sports, such as boating in summer, and ice sports, such as hockey and curling, should be encouraged, and for this purpose proper boathouses, clubs and landings should be erected, and grouped so as to gain some collective effect. In no case should boat proprietors be permitted to build any structure, the plans of which have not been approved by your department.

In developing our scheme we have never lost sight of the great aesthetic value of the Bow river, with its clear running water, its picturesque, tree-fringed embankments, and its wonderfully beautiful Spray falls, and therefore, we have sought to take advantage of these. Beginning at the bridge, we have planned for a balustraded wing wall or terrace, and for a river-side walk below this and passing through the bridge. From this point it meanders by the side of the river, again passes under No. 4 bridge, then for a short length (owing to the precipitous nature of the river bank) it joins the road, which is already partly formed, and which passes the Spray falls. But we sug-

gest that the mound overlooking the Spray falls should be laid out with walks and have a "rest house" or shelter overlooking the most picturesque portions of the falls and gorge.

The revenue from the hot springs might be increased threefold if only they could be located in a position more accessible from the town site. Visitors reasonably complain of the expense in getting to and from the hot springs, and of the time which is taken in bathing and the return journey. For this reason we would strongly urge the development of Middle springs, which are within 1,500 yards of the bridge. To this point water could easily be brought by gravitation from Hot springs, so there would be the choice of two temperatures. The site of Middle springs is excellent in every way, and bath houses, dressing-rooms, and the other necessary departments would together form an imposing and picturesque block, which might have, in addition to its beautiful natural surroundings, a tastefully laid out garden. Some important building devoted to curative treatment might also fall into the general scheme, the whole forming an interesting composition, which might claim comparison with the best that has been done at English and Continental spas. This is a work of such importance to the future success of Banff, that every advantage should be taken of your opportunity; but not, we suggest, until the most careful study has been given to its development. The location and general arrangement shown on our plans, however, give some indication of the possibilities.

Although the subdivision plans are described in a separate report, we wish to add that the diagonal roads, the principal one of which connects with the Canadian Pacific Railway hotel, and the curved roads which are laid out to follow contours, not only provide the most direct access to the several sections, but in themselves lend character and interest to the estate. In particular, the wide radial boulevard, with its central parkway, should, if laid out with practical skill, prove a very interesting feature and become one of the most frequented promenades for pedestrians.

Passing now to the development of the area north of the Canadian Pacific Railway tracks, and beginning at the group of cottages to which reference has already been made, we suggest that a wide area of land should be cleared and devoted to agricultural and dairying purposes. It is the cultivated valleys which, by contrasts, throw the mountains into such romantic relief. Moreover, the suggestion is based upon the economic fact that the needs of the growing population can best be met by local enterprise.

In addition to the areas devoted to agriculture, we strongly recommend the establishment of a good nursery garden located north and south of the tracks, and extending to about forty acres. The position shown is ideal for the purpose. It would support many men in an industry which would certainly add to the amenities of the district whilst, owing to its unique position for advertising itself, it would encourage the planting of trees and shrubs throughout the West. With the native arboricultural and floral wealth of the Rockies, it is even possible that an export trade might be fostered, for what will grow in the Rockies may prove to be hardy in any part of the temperate zone, and, of course, it is a well-known fact amongst botanists that many local and beautiful species and varieties have not yet found their way into commerce. Incidentally, the location of this nursery would preserve an open space. If the Government could not take charge of it, there would almost certainly be applications from private firms for the privilege of setting up a new nursery business.

We have left any detailed reference to the proposed new Zoölogical gardens until the last, because it seemed to us to be a feature of outstanding importance, and one to which a more than passing consideration should be given.

There is a general agreement amongst those best able to judge, that the present location near the bridge is impossible for a permanent establishment, and that the lack of arrangement and system which the site imposes is wholly wrong. Moreover,

the way in which your animals are kept in paddocks, separated by miles from the more varied collection, is extremely inconvenient and most uneconomic and wasteful. What we propose is that you should adopt a site large enough, and varied enough in contour, to house or paddock the whole of your collection.

The position we advise is in every way admirable for the purpose. It can be easily and effectively drained, an ample supply of running water is available, it is most convenient of access, and yet sufficiently removed to avoid any serious disturbance from the calls and shrieks of the animals. If it is felt that the buffalo must retain their present run, the new ground is contiguous, and, therefore, more easily managed.

As you are aware, the late Mr. Hagenback, of Hamburg, laid out a new zoölogical garden, giving to the animals an approximation to their natural *habitats*, and it has been so cleverly arranged, and the divisions so ingeniously screened, that the whole appears as one extensive garden, over which the animals roam at will. Of course, this is not really so, as the several sections are divided by canals and sunk fences. This famous "Zoo" is having a great effect on the planning of all new zoölogical gardens,—at Edinburgh, for instance; while the famous "Zoo" in Regent's Park, London, England, is being remodelled on the Hagenback plan.

A thorough-going development of your undertaking on this plan would be costly: but we think the natural conditions are such that an approximation to it might easily be realized, and it is with this possibility in mind that we have recommended the fan shaped principle of layout.

In Banff the severity of your winter demands some protection and artificial heat for some of the more tender animals and birds, and this has suggested to us the planning of an oval centre, laid out as a water garden for wild fowl, with an encircling range of shelters, designed as a whole, but adapted to the needs of the several classes for which they are intended, with a stream of water passing through each, and having steam heating from a central plant. For the remainder of the scheme, we would divide the ground into small paddocks, with separate shelters adapted to the nature of the animals to be housed.

To give some character to this important feature in our scheme, and also suitably house your "zoo," keepers and attendants, we have shown a grouping of workmen's cottages round a quaint entrance to the gardens. The cottages are very economically planned and suited to erection in local stone;—indeed, this local character should be as apparent in all these minor buildings as in the more important ones.

It is not claimed that any of the drawings in this section of our report are more than preliminary studies. It was our intention to carry forward our scheme to the same complete and final stage shown in our plans for the new sub-divisions; but, for reasons referred to in our covering letter, it seemed advisable to defer their development for the present.

On the architectural side our drawings show what would be the aesthetic aspect aimed at, but on the engineering side there is little to guide you, and yet this more practical aspect of your problem is most important, and is one which, finally, has an unquestioned influence even on the artistic development of Banff. The laying out and planting of open spaces, whether of gardens or recreation grounds, the assisting of nature along by the river walks, the design of the minor bridges Nos. 1, 2, 4 and 5: also the spacing of widths for varying classes of roads, the proportion of macadam roadway to the belts of grass and sidewalks, the spacing and arrangement of trees along the streets, and, particularly, the lighting, have all an important bearing on the final presentment; and, for this reason, we trust we may be permitted, after due consideration of our preliminary sketches and report, to give a reasonable completeness to the whole, and also to prepare our report for publication in book form, profusely illustrated by our plans and sketches and a selection of photographs, showing some of the charms of your unique park reservation.

METEOROLOGICAL TABLES.

Maximum and minimum temperatures and the general state of the weather between April 1, 1913 and March 31, 1914.

Date. 1913.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
April 1.....	35.2	2.0	Fair, very fine day, last day's sleighing 0 to 14 inches snow on ground.
" 2.....	38.3	-2.7	Fair, very fine day (perfect), Mountain bluebirds.
" 3.....	39.1	-1.8	Fair, very fine day, several western robins.
" 4.....	41.2	16.7	Fair, very fine day; several bald eagles flicker, mallard duck.
" 5.....	48.2	26.1	Fair, trace of rain, light snow evening; last of snowbirds seen.
" 6.....	37.0	24.8	Fair, light rain, light snow and snow flurries..
" 7.....	39.2	18.5	Fair, fine day; varied thrush.
" 8.....	43.0	14.2	Fair, very fine day; willows and aspens showing growth; Bow river opening above bridge.
" 9.....	46.8	19.7	Fair, very fine day; main road dry about town.
" 10.....	54.2	27.8	Fair, very fine day; ground vegetation shows some life.
" 11.....	59.5	26.2	Fair, several juncos; very fine spring day.
" 12.....	65.1	27.7	Fair, very fine day; N.W. crow.
" 13.....	65.9	27.9	Fair, perfect day; grass becoming green; butterfly seen.
" 14.....	62.5	30.8	Fair, perfect day.
" 15.....	62.3	28.7	Cloudy, fine day; wild geese; juncos common; staminate aspen catkins about to flower.
" 16.....	52.0	37.9	Cloudy, rain early morning, fine day; ruby crowned kinglet; mosquito.
" 17.....	56.0	29.0	Fair, perfect day; grass green in places.
" 18.....	62.3	25.8	Fair, perfect day; 2 buffle-head duck frogs piping in evening; first boating.
" 19.....	65.4	27.6	Fair, perfect day; Bow river open; Pasque flower (anemon:) in flower; bee; no snow on ground.
" 20.....	58.3	35.4	Fair, perfect day.
" 21.....	51.0	33.3	Cloudy, rain, light snow, thunderstorm.
" 22.....	33.2	25.2	Cloudy, snow early morning.
" 23.....	41.4	26.2	Fair.
" 24.....	46.0	28.9	Fair, fine day.
" 25.....	49.9	22.7	Cloudy, fine day; staminate willow catkin in flower.
" 26.....	52.1	31.9	Cloudy, snow during night, light rain early morning.
" 27.....	38.4	29.9	Cloudy, snow; 5 inches snow on ground.
" 28.....	38.2	21.0	Cloudy, snow; 1 to 7 inches snow on ground; large flock leucosticte.
" 29.....	32.3	22.0	Cloudy, raw day; many duck on Bow river.
" 30.....	39.0	21.2	Cloudy, light snow; 0 to 6 inches snow on ground..
May 1.....	40.9	19.7	Cloudy; snow flurries.
" 2.....	41.8	23.8	Cloudy; snow during night.
" 3.....	38.2	24.3	Cloudy; snow flurries; soft hail.
" 4.....	38.2	20.8	Fair, light snow.
" 5.....	46.0	16.6	Fair, very fine day; patches of snow on ground.
" 6.....	46.8	21.9	Cloudy, light rain and snow during night.
" 7.....	37.8	31.9	Overcast, light snow, cool day.
" 8.....	36.7	32.0	Overcast, rain and snow, raw day.
" 9.....	52.3	30.5	Cloudy, rain during night.
" 10.....	53.3	36.2	Cloudy, soft hail, fine day.
" 11.....	53.9	28.0	Cloudy, soft hail, rain, no snow about.
" 12.....	47.6	34.2	Cloudy, light rain, fine day.
" 13.....	51.8	33.1	Cloudy, rain and light snow.
" 14.....	50.5	34.3	Cloudy, light rain and snow.
" 15.....	52.8	31.9	Cloudy; rain and snow during night; fine day.
" 16.....	47.2	32.7	Cloudy; soft hail storm and light snow.
" 17.....	48.9	30.2	Fair; light snow early morning.
" 18.....	46.4	36.7	Cloudy; trace of rain; cool day.
" 19.....	57.5	30.2	Fair, very fine day; solar halo.
" 20.....	61.8	28.9	Fair, fine day.
" 21.....	63.0	34.2	Fair, very fine day; strong wind during night.
" 22.....	64.9	45.1	Fair; trace of rain early morning; very fine day.
" 23.....	65.2	37.3	Fair; trace of rain early morning; very fine day.
" 24.....	68.0	30.8	Fair, perfect day.
" 25.....	68.0	37.9	Fair; fresh breeze; very fine day.
" 26.....	64.8	50.2	Cloudy; trace of rain; fine day; light aurora 10 p.m.
" 27.....	66.8	36.0	Fair; rain; very fine afternoon.
" 28.....	64.1	45.0	Cloudy; rain, fine day.
" 29.....	65.3	34.9	Fair, very fine day.
" 30.....	70.3	40.0	Fair, very fine day, windy.
" 31.....	69.2	40.8	Fair, very fine day.

METEOROLOGICAL TABLES.—*Continued.*

Maximum and minimum temperatures and the general state of the weather between April 1, 1913, and March 31, 1914—*Con.*

Date. 1913.	THERMOMETER READINGS		Weather, etc.
	Maximum. for day.	Minimum for day	
June 1.....	74.7	33.2	Fair; windy; very fine day; strong wind at night.
" 2.....	59.0	48.3	Cloudy; rain 25 minutes.
" 3.....	70.8	41.5	Fair; very fine day.
" 4.....	70.8	38.7	Fair; trace of rain early night; fine day.
" 5.....	66.0	34.0	Fair; fine day.
" 6.....	69.5	40.9	Fair; fine day.
" 7.....	76.3	34.2	Fair; very fine day.
" 8.....	73.2	44.3	Cloudy; light rain; fine day; cotton flying from aspens.
" 9.....	75.9	45.0	Fair; trace of rain; very fine day.
" 10.....	77.3	46.9	Fair; perfect day.
" 11.....	77.2	40.9	Fair; perfect day.
" 12.....	76.2	39.3	Fair; rain.
" 13.....	69.1	47.7	Fair; fine day.
" 14.....	55.7	42.9	Fair; light rain early morning and rain during day.
" 15.....	63.9	40.0	Fair; fine cool day.
" 16.....	59.0	34.8	Cloudy; rain; gale 7 p.m. for short time.
" 17.....	68.2	30.8	Fair; light rain; fine day.
" 18.....	72.8	38.2	Fair; rain; thunderstorm one hour.
" 19.....	71.3	43.9	Cloudy; thunderstorm 6 p.m.
" 20.....	55.0	44.7	Cloudy; rain; cool day.
" 21.....	66.1	34.6	Fair; very fine day.
" 22.....	64.0	39.9	Fair; very fine day.
" 23.....	72.5	37.2	Fair; very fine day.
" 24.....	57.1	43.0	Cloudy; heavy, rain; light fresh snow on mountain.
" 25.....	55.2	44.9	Cloudy; rain, cold day.
" 26.....	53.3	40.5	Cloudy; rain.
" 27.....	52.4	44.0	Overcast; rain.
" 28.....	67.0	40.0	Fair; rain.
" 29.....	67.0	40.9	Fair.
" 30.....	65.9	43.9	Cloudy; rain; thunderstorm three quarters of an hours.
July 1.....	62.5	47.0	Fair; light rain, fine day.
" 2.....	62.0	37.7	Fair; light rain early morning; fine day.
" 3.....	64.2	39.0	Fair; fine day.
" 4.....	62.0	43.9	Cloudy; rain.
" 5.....	69.8	41.0	Fair; very fine day.
" 6.....	81.0	38.0	Fair; fine day; thunderstorm and gale 7.30 p.m. to 10.30 p.m.
" 7.....	65.9	50.0	Fair; gale.
" 8.....	74.0	36.7	Fair; very fine day.
" 9.....	76.3	46.3	Fair; very fine day.
" 10.....	69.8	51.0	Fair; light rain at night, 1 hour.
" 11.....	63.2	44.4	Fair; fresh snow on Lake Minnewanka Mountains.
" 12.....	57.3	34.7	Cloudy; rain, fresh snow at 7,000 ft.
" 13.....	45.5	39.3	Cloudy; rain; cool wet day; fresh snow on mountains.
" 14.....	53.8	39.4	Cloudy; light rain early morning; fine day.
" 15.....	62.0	44.2	Cloudy; light rain.
" 16.....	64.5	35.8	Fair; fine day.
" 17.....	72.8	34.0	Fair; very fine day.
" 18.....	81.8	38.8	Fair; perfect day.
" 19.....	85.2	41.0	Fair; perfect day.
" 20.....	86.8	44.0	Fair; hot day, distant thunder.
" 21.....	79.2	48.5	Cloudy; heavy thunderstorm, Bankhead and lake; only few drops of rain at Banff, with thunder. Thunderstorm 7.30 p.m.; one hour; trace of rain, Banff, 11.30; thunderstorm, with rain, Banff.
" 22.....	68.0	51.0	Cloudy; strong wind afternoon; 6.30 p.m., half-hour's rain; thunder north.
" 23.....	76.5	49.0	Cloudy; fine day.
" 24.....	84.0	43.0	Fair; perfect day.
" 25.....	73.0	45.5	Fair; fine day.
" 26.....	70.5	39.0	Fair; fine day.
" 27.....	75.9	42.0	Fair; very fine day.
" 28.....	68.6	45.8	Cloudy; rain 6.45 p.m. through midnight.
" 29.....	60.5	39.1	Fair; fine day.
" 30.....	67.0	37.8	Fair; fine day.
" 31.....	76.8	44.0	Fair; very fine day.

Maximum and minimum temperatures and the general state of the weather between April 1, 1913, and March 31, 1914—*Con.*

Date. 1913.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
Aug. 1.....	83.2	41.5	Fair, perfect day.
" 2.....	82.2	45.2	Fair.
" 3.....	82.2	49.8	Fair; perfect day.
" 4.....	79.8	43.8	Fair; thunder early afternoon; no rain fall.
" 5.....	81.8	39.8	Fair; rain; thunder 8 p.m., two hours; fine day.
" 6.....	66.0	48.2	Cloudy; rain, with some thunder.
" 7.....	60.0	48.5	Cloudy; heavy rain during night.
" 8.....	59.8	42.0	Cloudy; rain; fresh snow on mountains.
" 9.....	56.2	42.0	Cloudy; rain; fresh snow on mountains.
" 10.....	69.5	39.0	Fair; fine day.
" 11.....	73.0	51.8	Fair; trace of rain.
" 12.....	58.2	46.0	Cloudy; heavy rain with thunder and rain during night.
" 13.....	63.0	42.5	Cloudy; light showers during night.
" 14.....	58.2	42.5	Cloudy; rain and heavy rain; thunderstorm, 3.30 p.m.
" 15.....	53.8	42.8	Fair; fine but cool day.
" 16.....	62.0	30.2	Fair; very fine day.
" 17.....	48.7	40.0	Cloudy; heavy rain; fresh snow on mountains.
" 18.....	54.9	39.0	Fair; rain early morning; light rain afternoon fifteen minutes.
" 19.....	61.0	45.2	Fair; fine day.
" 20.....	67.8	40.1	Fair; very fine day.
" 21.....	74.2	82.7	Fair; perfect day.
" 22.....	79.5	38.5	Fair; very fine day.
" 23.....	78.2	41.8	Fair; fine day.
" 24.....	75.8	50.5	Fair; very fine day.
" 25.....	79.2	38.0	Fair; fine day.
" 26.....	75.2	51.0	Fair; fine day; strong wind late afternoon; lightning, 8.30 p.m., 1 hour.
" 27.....	71.8	48.5	Fair; very fine day.
" 28.....	79.2	35.8	Fair; very fine day.
" 29.....	80.0	50.0	Fair; very fine day; much lightning 8.30 p.m. to midnight.
" 30.....	67.8	51.0	Cloudy; thunder and lightning, 8 p.m., with little rain; lightning at midnight; fine day.
" 31.....	57.5	44.0	Cloudy; rain early morning and light showers off and on all day and through night.
Sept. 1.....	56.0	37.0	Fair; fresh snow on mountains; fine day with few passing showers.
" 2.....	61.8	32.0	Fair.
" 3.....	61.0	44.0	Cloudy; rain.
" 4.....	58.0	44.8	Cloudy; heavy rain.
" 5.....	51.2	41.0	Cloudy; rain; fresh snow on mountains.
" 6.....	56.0	34.5	Fair; very fine day.
" 7.....	67.0	26.8	Fair; perfect day.
" 8.....	72.9	34.3	Fair; perfect morning and very fine afternoon.
" 9.....	49.3	36.9	Fair; rain early morning; snow flurries; fresh snow on mountains.
" 10.....	51.1	34.4	Fair; very fine, though cool day.
" 11.....	64.7	39.0	Fair; perfect day.
" 12.....	71.4	32.0	Fair; very fine to perfect day.
" 13.....	64.3	39.8	Fair; light rain afternoon, fine day.
" 14.....	56.1	31.9	Fair; very fine day.
" 15.....	60.5	27.9	Fair; perfect day.
" 16.....	64.4	34.8	Fair; very fine day.
" 17.....	66.7	43.3	Fair; thunderstorm with heavy rain, 6 p.m., and through night and rain afternoon; fine day.
" 18.....	54.0	42.9	Fair; fresh snow on mountains; hail 1 p.m., five minutes; fine afternoon.
" 19.....	58.0	27.6	Fair; perfect day.
" 20.....	65.3	28.3	Fair; perfect day.
" 21.....	63.2	36.0	Fair; rain 11 p.m. through night; fine day.
" 22.....	49.3	35.1	Cloudy; rain ceased 7.15 a.m.; fresh snow on mountains down to 6,000 ft.
" 23.....	53.8	28.3	Fair; perfect day.
" 24.....	60.9	27.9	Fair; perfect day.
" 25.....	65.1	29.8	Fair; perfect day.
" 26.....	64.3	33.6	Fair; perfect day.
" 27.....	66.3	35.8	Fair; perfect day.
" 28.....	65.0	39.3	Fair; fine day.
" 29.....	54.2	43.0	Cloudy; rain.
" 30.....	60.0	31.9	Fair; perfect day.

Maximum and minimum temperatures and the general state of the weather between April 1, 1913, and March 31, 1914—*Con.*

Date. 1913	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
Oct. 1.....	64.1	34.8	Fair; perfect day.
" 2.....	53.1	39.4	Cloudy; rain; fresh snow lower down on mountains.
" 3.....	39.3	23.4	Cloudy; light snow and snow during night.
" 4.....	35.8	27.5	Cloudy.
" 5.....	40.8	21.0	Fair; fine day.
" 6.....	37.7	16.6	Cloudy.
" 7.....	39.2	19.2	Cloudy.
" 8.....	37.3	22.9	Cloudy; snow early morning and light snow during day.
" 9.....	38.5	24.6	Cloudy.
" 10.....	36.4	24.9	Fair.
" 11.....	43.1	30.3	Cloudy; light snow early morning; rain and strong wind afternoon.
" 12.....	57.0	39.3	Fair, rain; strong wind at times; afternoon fine.
" 13.....	43.7	35.2	Cloudy; rain early morning and to 3 p.m.; light rain through night; light snow afternoon and night.
" 14.....	35.6	27.0	Fair; snow flurries.
" 15.....	36.0	22.6	Fair; fine day, water ousels about.
" 16.....	38.2	22.4	Fair; fine day.
" 17.....	38.3	21.2	Fair; fine day.
" 18.....	40.2	25.2	Cloudy; fine day, very fine sunrise.
" 19.....	49.2	34.0	Fair; strong wind afternoon; fine day.
" 20.....	54.0	33.2	Fair; gale; otherwise a very fine day.
" 21.....	47.2	33.4	Fair; very fine day.
" 22.....	54.2	35.0	Fair; trace of rain with gale at times.
" 23.....	55.9	44.8	Fair; light rain; very fine warm morning and rain during night, strong wind.
" 24.....	44.2	28.0	Fair; snow 19th to 24th; several light-bodied moths about.
" 25.....	35.0	15.5	Fair; perfect day; snow patches to 1 inch.
" 26.....	37.0	23.8	Cloudy, snow during night.
" 27.....	36.3	26.9	Fair; snow to 9.30 a.m.; light snow early eve.
" 28.....	32.5	15.0	Cloudy; snow in patches.
" 29.....	34.0	21.0	Fair; light snow morning; duck on river.
" 30.....	34.2	8.7	Fair; perfect day; Bow frozen over in places.
" 31.....	39.0	5.2	Fair; perfect day; Bow frozen over to boat house; patches to 3 inch snow on ground.
Nov. 1....	40.8	31.2	Cloudy, strong wind afternoon; fine mild day.
" 2....	39.2	15.4	Fair, perfect day, patches of snow 2 inches on ground.
" 3....	44.0	15.0	Fair; very fine day moderate wind.
" 4....	41.3	25.0	Cloudy; light snow part afternoon; patches of snow.
" 5....	38.0	28.7	Cloudy.
" 6....	36.9	28.0	Cloudy; light snow, solar corona; mild.
" 7....	37.0	26.8	Fair; very fine day.
" 8....	42.2	29.2	Fair; squally wind; very fine day, lunar corona and halo.
" 9....	43.0	28.0	Cloudy; rain 5.30 p.m. through night.
" 10....	37.6	31.9	Cloudy; rain; light snow; fine cloud effects.
" 11....	33.2	16.8	Fair; fine day.
" 12....	30.9	16.8	Fair; very fine day; no snow on ground.
" 13....	31.8	14.9	Fair; Bow partly frozen over.
" 14....	34.3	14.0	Fair, perfect day.
" 15....	42.6	26.8	Cloudy, gale, snow 6 p.m. to 7 p.m. and through night.
" 16....	36.2	31.3	Overcast, rain, snow; 4 inches snow on ground; indifferent sleighing.
" 17....	28.0	22.5	Overcast; fair night; snow 4 p.m. and through night.
" 18....	28.2	16.9	Fair; snow 10 a.m. to 11 a.m.; 8 inches snow on ground sleighing good.
" 19....	28.7	19.9	Cloudy; snow flurries.
" 20....	25.0	14.5	Fair; light snow early morning; perfect day.
" 21....	19.2	-5.6	Fair; perfect day; Bow river frozen over and bearable.
" 22....	26.1	10.5	Cloudy; snow flurries and light snow.
" 23....	30.8	23.3	Cloudy; snow 3.45 p.m. and through night.
" 24....	37.2	24.2	Cloudy; mild, rain, 12 inches snow on ground.
" 25....	38.2	27.8	Fair; light snow early morning; thaw; very fine day.
" 26....	37.2	30.2	Fair; snow early morning and to 8.30 a.m.; fine day.
" 27....	40.0	26.2	Cloudy; light snow.
" 28....	29.1	13.1	Fair; fine day.
" 29....	31.3	12.0	Cloudy.
" 30....	32.7	23.1	Fair; fine day; large flock of snowbirds; 10 inches snow on ground.

Maximum and minimum temperatures and the general state of the weather between April 1, 1913, and March 31, 1914—*Con.*

Date. 1913.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
Dec. 1....	26.8	9.0	Fair; fine day; very fine sunset.
" 2....	30.2	14.2	Fair; strong wind; fine day; very fine sunrise.
" 3....	33.0	15.8	Fair; very fine day.
" 4....	21.5	6.0	Fair; perfect day; Bow river frozen to about 50 yds. west of bridge.
" 5....	26.2	15.8	Fair; gale.
" 6....	22.4	7.7	Fair; fine day. Bow river ice about 6 inches thick: large flock Bohemian wax wings.
" 7....	31.9	14.9	Cloudy; 8 inches snow on ground; roads glisteningly slippery.
" 8....	27.7	15.2	Fair; wind making about 20 miles; gale 45 miles 6 p.m. to 7 p.m.; lunar corona very fine sunrise.
" 9....	29.2	19.2	Fair; gale; wind very chilly.
" 10....	30.1	13.6	Fair; strong wind 20 miles; about 2-ft. snow at Laggan.
" 11....	35.4	19.9	Fair; very fine day.
" 12....	37.3	28.2	Fair; strong wind 20 miles, but very fine day lunar rainbow as moon rises.
" 13....	31.8	19.1	Cloudy; undulated cirrus-stratus clouds.
" 14....	35.1	16.7	Cloudy.
" 15....	35.2	30.1	Fair; strong wind; very fine night.
" 16....	33.1	25.9	Fair; very fine morning; strong wind afternoon.
" 17....	23.9	12.9	Fair; fine bright day.
" 18....	20.2	4.2	Fair; light snow.
" 19....	8.9	-5.3	Fair; fine bright day.
" 20....	15.2	-3.2	Fair; fine bright day; 7½ inches snow on ground.
" 21....	11.0	1.2	Fair; gale.
" 22....	15.2	-4.8	Fair.
" 23....	9.0	-6.7	Fair; fine bright day.
" 24....	13.0	-8.0	Fair; fine bright day.
" 25....	15.9	-4.9	Fair; fine day.
" 26....	24.3	5.4	Fair; Lake Minnewanka frozen over; ice about 15 inches; fine day.
" 27....	32.1	18.6	Fair; strong wind.
" 28....	28.3	22.0	Fair; perfect day.
" 29....	19.1	6.5	Fair; perfect day.
" 30....	15.1	-2.3	Fair; wind 20 miles; bright day.
" 31....	24.8	12.0	Cloudy; snow 5 p.m. through night; 7¼ inches snow on ground.
1914.			
Jan. 1....	28.0	19.7	Fair, very fine day.
" 2....	26.1	7.9	Cloudy, wind to 25 miles.
" 3....	32.3	22.9	Fair; very fine and mild day.
" 4....	33.8	25.2	Overcast; light snow; rain afternoon and through night.
" 5....	40.0	32.2	Cloudy; rain to 7 a.m. 9 a.m., rain 10 p.m. and through night.
" 6....	39.1	30.0	Overcast; rain to 8 p.m.; snow 8 p.m. and through night.
" 7....	33.9	28.8	Cloudy; snow to noon and 1 p.m.
" 8....	24.5	16.0	Fair; snow flurries early morning; fog about 8 a.m. to 11 a.m.; fine day; very large clear lunar corona.
" 9....	19.2	5.9	Cloudy; light snow; several Rocky Mountains pine grossbeaks.
" 10....	22.0	2.0	Fair; lunar halo; fine day.
" 11....	30.4	20.0	Cloudy; fine mild day.
" 12....	25.0	18.9	Fair, wind of 25 miles.
" 13....	31.4	19.3	Cloudy, fine and mild.
" 14....	25.3	12.9	Cloudy; light snow.
" 15....	30.0	19.2	Cloudy; light snow early morning; fine and mild.
" 16....	31.2	17.2	Fair; very fine day.
" 17....	25.3	11.8	Cloudy; snow evening to about midnight.
" 18....	21.0	11.9	Cloudy; snow about noon and through night.
" 19....	10.7	1.0	Fair; very fine day.
" 20....	9.2	-9.6	Fair; fine bright clear day.
" 21....	13.0	-13.9	Fair; snow about midnight and through night; fine, bright calm day.
" 22....	14.9	6.8	Cloudy; snow.
" 23....	-1.7	-7.7	Cloudy; snow; blustery cold; snow drifting.
" 24....	6.3	-24.3	Fair; light snow 10 p.m.; Bow river frozen to 6-ft. from bridge; 13 inches snow on ground; fine clear bright day.

Maximum and minimum temperatures and the general state of the weather between April 1, 1913, and March 31, 1914—*Con.*

Date. 1914.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
Jan. 25...	15.2	-1.3	Cloudy; snow 6.45 p.m. through night; lowest barometer likely on record, 29.18.
" 26...	3.8	-10.5	Cloudy; snow.
" 27...	-0.2	-19.5	Cloudy; snow afternoon and evening.
" 28...	10.2	-25.3	Fair; very fine, bright and clear; 18½ inches snow on ground.
" 29...	26.8	8.2	Cloudy; light snow evening; strong wind.
" 30...	29.8	22.9	Cloudy; strong wind for a time; fine day.
" 31...	27.1	18.9	Cloudy; fine day.
Feb. 1...	21.5	9.3	Cloudy; snow flurries.
" 2...	8.9	-12.0	Fair; very fine day; large lunar corona.
" 3...	14.3	-2.0	Fair; light snow evening.
" 4...	-8.8	-16.6	Fair; strong wind to early afternoon; snow drifting.
" 5...	-3.8	-41.6	Fair; bright clear calm, very cold; distant objects very distinct and sound also very distinct.
" 6...	7.9	-18.5	Fair; bright clear day.
" 7...	7.0	-28.3	Fair; cold wind afternoon; lunar halo and corona.
" 8...	28.2	5.0	Cloudy; wind to 15 miles.
" 9...	29.0	12.8	Fair; fine day; flock of Prairie Chicken (and seen in January).
" 10...	27.0	0.8	Cloudy; fine day.
" 11...	34.0	5.2	Fair; very fine day.
" 12...	36.2	24.7	Cloudy; thawing.
" 13...	36.0	12.2	Fair; thawing.
" 14...	40.3	21.8	Fair; very fine day; thaw.
" 15...	40.0	26.3	Fair; perfect day.
" 16...	35.0	22.8	Fair; gale; bright, clear, thaw; mountain bluebird.
" 17...	32.3	6.9	Fair.
" 18...	25.7	16.3	Cloudy; light snow; ice Bow river 23 inches.
" 19...	32.4	-3.2	Fair; perfect day.
" 20...	36.2	1.2	Fair; perfect day.
" 21...	14.3	2.0	Cloudy; light snow; slightly blustery.
" 22...	38.0	5.0	Cloudy; light snow early morning; thawing.
" 23...	38.9	22.3	Fair; very fine morning; red-breasted nuthatch.
" 24...	38.0	29.1	Cloudy; thawing; sleighing still good.
" 25...	36.0	20.8	Fair.
" 26...	38.1	25.9	Cloudy; gale; thawing; snow drifting.
" 27...	35.3	31.0	Cloudy; light snow.
" 28...	36.0	13.4	Cloudy; sleighing becoming bad on main road.
March 1...	39.0	26.6	Cloudy; snow early morning and to 9.45 a.m.
" 2...	35.8	27.8	Fair; wheeled vehicles in use.
" 3...	37.0	27.5	Fair; strong wind; flock Rocky Mountain crossbeaks.
" 4...	36.1	24.0	Fair; soft hailstorm few minutes; light snow early morning; fine day.
" 5...	34.0	8.0	Fair; very fine day; flock Redpolls.
" 6...	38.0	11.9	Fair; fine day.
" 7...	43.3	23.7	Fair; very fine day; sleighing bad on main traffic roads; snow going fast.
" 8...	44.4	34.6	Fair; snow flurries and soft hail.
" 9...	34.6	21.0	Fair; very fine day.
" 10...	39.2	4.9	Fair; perfect day.
" 11...	47.4	16.0	Fair; very fine afternoon.
" 12...	51.0	26.0	Fair; rain 7 p.m. and through night; perfect day; chinooking.
" 13...	43.0	32.2	Cloudy; gale; chinooking; flock Crossbills.
" 14...	40.0	34.2	Cloudy; rain; light snow day and snowstorm heavy from 6 p.m. to 7 p.m. Robin reported seen.
" 15...	35.0	26.1	Fair; sleighing only on few sheltered roads; Western robin.
" 16...	37.0	24.8	Cloudy.
" 17...	44.3	27.7	Cloudy; rain; snow 5 p.m. to 9.30 p.m. heavy gale; robin seen and heard.
" 18...	37.4	8.9	Fair; very fine day.
" 19...	43.9	22.6	Cloudy; fine day; Bow river opening in places snow on ground 0 to 10 inches, Junco.
" 20...	35.0	17.2	Fair; fine day.
" 21...	47.2	16.2	Fair; very fine day; flock Bohemian Waxwings and chickadees; ants out.
" 22...	45.0	28.2	Fair; snow evening; Mountain Bluebird common.
" 23...	36.2	25.2	Cloudy; light snow; fine day; flock of grey crowned Leucosticte
" 24...	12.3	5.9	Cloudy; gale; Buffle-head duck on Bow river where open.

Maximum and minimum temperature and the general state of the weather between April 1, 1913, and March 31, 1914—*Con.*

Date. 1914.	THERMOMETER READING.		Weather, etc.
	Maximum for day.	Minimum for day.	
March 25...	2.2	-4.8	Cloudy; wind very cold.
" 26...	21.0	-20.6	Fair; very cold; Canada Jay.
" 27...	27.2	-1.2	Cloudy; last snowflakes seen.
" 28...	38.9	3.4	Cloudy; western robins common. Blackbird seen.
" 29...	45.0	15.2	Cloudy; bald-headed eagle seen.
" 30...	38.3	21.7	Cloudy; light snow, foggy morning.
" 31...	39.0	18.9	Fair; snow for three hours.
			1913-14 was a very fine mild winter.

N. B. SANSON,

Meteorological Observer.

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Canada - National Parks Bureau

Government
Publications

DEPARTMENT OF THE INTERIOR, CANADA

Hon. W. J. ROCHE, Minister. W. W. CORY, Deputy Minister

DOMINION PARKS BRANCH

J. B. HARKIN, Commissioner.

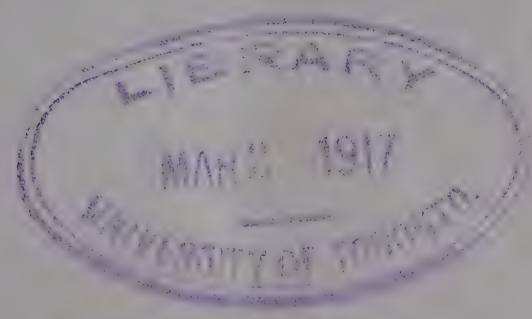
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Annual

REPORT OF THE COMMISSIONER OF DOMINION PARKS

FOR THE YEAR ENDING
MARCH 31, 1915

1914/15



OTTAWA
GOVERNMENT PRINTING BUREAU
1916



Big Horn Sheep, Rocky Mountains Park.

DEPARTMENT OF THE INTERIOR, CANADA

Hon. W. J. ROCHE, Minister. W. W. CORY, Deputy Minister.

DOMINION PARKS BRANCH

J. B. HARKIN, Commissioner.

REPORT OF THE
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DOMINION PARKS

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ILLUSTRATIONS

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DOMINION PARKS.

REPORT OF THE COMMISSIONER OF DOMINION PARKS.

OTTAWA, June 30, 1915.

W. W. CORY, Esq., C.M.G.,

Deputy Minister of the Interior.

SIR,—I beg to submit my fourth annual report of the Dominion Parks Branch of the Department of the Interior.

The year 1914-15 was a year of active development. The details of the work carried on are covered by the reports—attached hereto—of the Chief Superintendent of Dominion Parks and of the superintendents of the individual parks. As on previous occasions I shall devote my attention to a statement of the aims and ideals on which the national parks are being developed.

I have each year emphasized the fact that national parks are not national ornaments, but are essentially service parks; that they exist to render real, necessary, and valuable service to the people of Canada.

The unparalleled conditions which the war has brought about, the extraordinary conditions which will prevail when the war is over, accentuate the necessity of still greater activity along the lines on which parks development has been taking place. There are two general lines on which parks directly and effectively operate to the advantage of the Dominion. One is purely commercial—it relates to the money which the parks by their extraordinary attractions bring into the Dominion through tourist traffic. The other is humanitarian, it relates to what the parks do for the people of Canada by providing for them facilities for recreation (and proper recreation is a most important factor in the matter of moral, mental, and physical efficiency) and the encouragement they give to all Canadians to develop habits of sane recreation.

COMMERCIAL POSSIBILITIES.

No feature of the war conditions has been more apparent than the commercial depression which has been one of its accompaniments. It has driven home the necessity of Canada's making the most efficient and intelligent use of all her natural resources. The sublime grandeur of Canada's national parks constitutes a very important commercial asset, because of the tourist traffic which it attracts. From year to year I have submitted figures to show the almost unbelievable sums that are annually spent by the world's tourists. A calculation based on the number of tourists attracted to Canada's most important park, that at Banff, during the past five years, indicates very clearly how valuable parks are to the Dominion from the commercial standpoint:—

VISITORS AT BANFF.

Season.	Canadian.	Foreign.	Total.
1910-11.....	26,274	37,220	63,494
1911-12.....	30,000	43,725	73,725
1912-13.....	45,709	30,173	75,882
1913-14.....	36,144	24,681	60,825
1914-15.....	32,881	15,016	47,897
	171,008	150,815	321,823

The foreign tourist will in most cases spend about \$100 in transportation alone and, in addition, spend large sums on hotels, liveries, souvenirs, etc. But taking \$100 as the average expenditure of each foreign tourist, which is a very low estimate, then during the five years in question foreign tourists who visited Rocky Mountains Park spent in Canada the sum of \$15,081,500.

Now, as to Canadians: during the five years in question the total Canadian visitors were 171,008. If each spent on an average only \$50—and this, too, is a very low estimate because large numbers of the Canadian tourists come from Eastern Canada and therefore pay high transportation charges—then we find that this park resulted in keeping at home \$8,550,400.

Large as these figures are, they represent but a small part of what Canada may derive in future years in actual dollars and cents from its national parks if they are adequately developed to attract tourist traffic. This traffic is fraught with the greatest of potentialities from the purely business standpoint. It is unique in this regard that while it brings in large sums of money it means that the country does not give in return anything which represents a loss to the country. When wheat is sold we sell a portion of the fertility of our soil. But the tourist who pays his money to see our mountains and lakes and falls, our canyons and glaciers, not only leaves his money but also leaves whole and unimpaired all those natural attractions which brought him here. These beauties remain forever to attract more tourists and more tourists' dollars.

There are hundreds of points in Canada not included in parks, which possess outstanding attractions for tourists. There is almost no limit to the amount of tourist business which can be secured, but it will not come to Canada unless it is sought. If Banff alone in five years can attract an aggregate business of approximately twenty-four millions, it seems obvious that there should be an organization developed—either as a part of the parks organization or independent of it—which will actively seek to attract tourist traffic to Canada.

A TOURIST BUREAU.

Up to the present, efforts to attract tourist traffic have been left to the transportation companies. The country does not leave its immigration propaganda in the hands of the transportation companies, though they are direct beneficiaries from immigration.

Canada's "out-of-doors" both within and without the national parks, is a huge source of potential revenue. A tourist bureau, equipped to deal intelligently with the development of this great national asset appears justified, appears to be demanded in the best interests of Canada and its people. The Parks Branch, as the only federal organization having any direct concern in matters closely related to the development of tourist traffic, has given a good deal of consideration to the question of a tourist bureau. Many suggestions as to organization and policy in that regard have been developed. Several points stand out in this connection. Foreign tourists will not come to Canada unless they are made familiar with the attractions Canada has to offer them. Publicity by interested transportation companies can never be sufficiently effective or adequate because the public is apt to discount any literature issued by them, and any representations made by them, on the ground that they are primarily concerned in selling transportation and so are primarily seeking to secure the tourists' money by any means. The tourist, moreover, wants to know not only that there are worth-while attractions for him, but that when he arrives he will be assured of conveniences, comfort and safety. It is obvious that in regard to all these points, a federal Tourist Bureau alone can adequately and satisfactorily meet the situation. Personally I am convinced that an efficient organization can be developed at comparatively little cost, and that through it a huge revenue can be secured for the people of Canada, which will contribute materially towards meeting the extraordinary expenditures the country has to meet in connection with the war.

THE HUMAN SIDE.

If war conditions make it desirable for Canada to proceed with an active development of its potential commercial resources, they also, perhaps to an even greater extent, demand renewed activity with respect to that other aspect of parts work—the humanitarian.

Any country's greatest asset is its human units. It matters not what Canada's resources of soil, and forests, and mines, and waters may be, its position in the world, the condition of its people, will depend on the efficiency of its human units. As explained in previous reports, Dominion Parks work, as it really is, stands for those things which are essential to human efficiency—for those things which promote physical, mental, and moral welfare.

As a result of the war, Canada is losing thousands of her most efficient human units. As a result of the war, thousands of her soldiers who return will be maimed or incapacitated. As a result of the war, industrial and economic conditions in Canada will present many new and complicated problems requiring an efficient population to solve. Canada therefore more than ever requires those things which promote human efficiency.

In previous reports I have pointed out in detail the many conditions—unsanitary habits of life, overheated rooms, lack of fresh air, poorly arranged factories and workshops, exclusion of sunlight, foul air, drudgery, monotony, lack of play, and similar hurtful conditions—which are constantly sapping the efficiency of the people. I also pointed out that while many agencies must work to eliminate these adverse conditions, the ideal behind national parks—ample facilities for all Canadians to enjoy recreation in the out-of-doors—if realized, would offer a powerful antidote to these conditions, a means of largely minimizing their corrosive influence. To avoid repeating in detail how parks can and do effectively serve this purpose, attention is called to a few familiar instances of what life in the out-of-doors under proper conditions does for the human being. Every one in Canada has seen for himself the transformation that has been brought about in our troops—the bright eyes, the decisive step, the healthy glow—after a few weeks of “setting-up” in a military camp. For centuries, tuberculosis was an all-powerful and ever-victorious enemy of the human race until a few years ago, when it was discovered that nature—life in the open air close to nature—was an effective remedy, and now the “white plague” is fast disappearing. National parks exist for the purpose of providing for all the people of Canada facilities for acquiring that virile and efficient manhood so noticeable in Canadian military training camps.

During 1914-15, large extensions were made in the areas of the parks. Attention is called to the aims and ideals behind parks to emphasize the necessity of still further extensions, extensions to continue until every citizen of Canada, no matter where he may live, will be within easy access of a park where he can enjoy, by right of citizenship, those facilities for recreation in the open air which are necessary for his well-being, and where he will develop habits which will dominate his life after he has left the parks.

For the value of parks to Canada's people consists perhaps fully as much in their influence in the development of proper habits of recreation in the out-of-doors as it does in the effect on the individual of an outing in a park. It has been well said “Habit is the supreme law of human nature. It is our supreme strength—or our greatest weakness.” A habit of recreation in the open air, close to nature, means so much to an individual efficiency and welfare that it is vital that it be encouraged and developed.

PRESERVATION OF WILD LIFE.

During the year considerable work was also done by the branch in connection with the preservation of wild animals and migratory birds—a natural division of parks' work. National parks exist to preserve not only as much as possible of the natural

scenic beauty of the country, but also the fauna and flora and other wild life, for the pleasure and benefit of the generations that are to come. In future years the parks should be the natural history schools of Canada, and ultimately, as civilization encroaches more and more upon the wilderness, the parks will probably be the only places where the native fauna and flora will be found in a natural state.

A couple of years ago Prof. W. T. Hornaday, Director of the New York Zoological Park, startled North America by his book "Our Vanishing Wild Life" in which he clearly showed that America is rapidly becoming a gameless continent, and that unless drastic action is taken at once, practically all wild life will follow the carrier pigeon, the great auk, and the bison, to extinction.

A number of the native birds and animals of Canada are forever extinct. The buffalo was saved at the last moment by the Canadian Government's purchase of the Pablo herd in Montana and the establishment of Buffalo park. If this action had not been taken, the buffalo, the finest wild animal native to Canada, would have been a thing of history only to succeeding generations. The buffalo are now, however, increasing rapidly in the great reserve set apart for them, and it seems probable that Canadians for all time to come will be able to visit the park and enjoy the pleasure of seeing these animals living in a natural state.

While the case of the antelope is not yet so desperate as that of the buffalo, it is fast approaching it. Without protection, there seems no doubt that this graceful animal will be extinct within a very few years. Since the facts were realized, the Parks Branch has been taking steps to prevent the extinction of the antelope. The experiment was first tried of capturing a number and placing them in Buffalo park, but either because the natural food was not what was required, or because they suffered from the shock of capture, the animals did not thrive, and almost all of them died within a few months. Several attempts have been made but have met with little success. During the past year it was decided to try building a reserve about them by inclosing a few square miles in a locality in which a band was found to be living, thus ensuring natural conditions of food, etc., and avoiding the necessity for capture, which seems to have a very injurious effect upon these exceedingly timid animals. It is hoped that in this way better results may be secured.

While the deer, moose, elk, and caribou have not suffered so severely as the buffalo and antelope, Prof. Hornaday shows conclusively that many species are in need of greater protection. The mule deer, one of the finest animals known to sportsmen, has, he asserts, already been four-fifths exterminated; the barren-land caribou, in spite of the enormous numbers still living, will, he predicts, be swept away in 100 years or less; while the moose, except where protected, will surely and rapidly disappear. These conditions emphasize the need of active steps being now taken. Protective laws, while of very great importance, must be supplemented by ample sanctuaries. All Dominion parks are wild-life sanctuaries, and everything done in connection with the extension of parks from the purely humane standpoint previously referred to, will at the same time contribute in a most important and effective way towards the preservation of Canadian wild life.

In this connection, perhaps it is not out of place to call attention to what the preservation of wild life in the national park at Banff has brought about. A few years of rigid protection has resulted in a very great increase in the wild life of the parks. To-day thousands of tourists make special trips to see the large herds of mountain goat, sheep, and other animals that are to be found roaming there in a wild state. These animals have become an attraction to the tourist that is perhaps not even second to the grandeur of the mountain scenery. The protection of wild life in this park adds enormously to its recreational value, and from the purely commercial standpoint it pays because it is to-day attracting and will continue to attract in succeeding years the dollars of the tourist. People love to look at wild animals. The crowds that constantly surround cages in zoos show this, but the attraction of animals in their wild state is immeasurably greater.

The extension of Jasper and Waterton Lakes parks, which took place during the year, will largely contribute towards the preservation of wild life in the Rockies. Jasper park was enlarged from 1,000 to 4,400 square miles, and extended to the south so as to take in the great Brazeau country, which, in addition to possessing striking scenic beauty is among the best big-game districts in the Rockies. Reports from many sources showed that this big game was suffering severely from the inroads of Indians and others, and the most feasible means of protecting it appeared to be by extending the park boundaries as described.

On the borders of Waterton Lakes park there was, similarly, a district famous for Rocky Mountain sheep and goat. The original area of the park, 13.50 square miles, was so small that it afforded practically no protection to the wild sheep and goats of this region. As a result of strong representations from the Camp-Fire Club of America, and other parties interested in the preservation of wild life, it was decided to extend the boundaries of the park to the south as far as the international boundary so as to make it adjoin the United States Glacier national park, thus practically establishing an international game reservation, and to the north as far as the west branch of the Southfork river, covering 423 square miles in all.



Flock of Wild Sheep crossing new-motor road, Rocky Mountains Park.

FUR-BEARING ANIMALS.

The increased protection of fur-bearing animals appears to be dictated by every principle of wisdom and economy. Our fur-bearing animals were once the source of immense wealth to Canada, but we have been extremely wasteful with this as with other resources, and have made enormous inroads on our original capital. The value of preserves in restoring the original wealth of wild life is shown by the success which has attended the preservation of beaver in Algonquin park. What has been done there for the beaver can be done for all other wild fur-bearing animals by the creation of reserves in those districts which are known to be their natural habitat. The Parks Branch has during the past year been making investigations with a view to definitely deciding what districts are best adapted for such reserves.

BIRD PROTECTION.

There is, in addition, great need for sanctuaries for our wild fowl—for the wild geese, duck, plover, etc., of the inland, and for the gulls, terns, and gannets of our sea-coasts. In the United States, sanctuaries are also being established for song-birds, with most encouraging results. There is no doubt that these reserves are doing much to repair the waste of bird-life which is proving so costly to agriculture, through the consequent increase in insect life. The creation of song-bird sanctuaries in Canada in those parts of the country which suffer most from the depredations of insects might well be considered at the present time.

Active co-operation for the preservation of migratory bird life between the United States and Canada also appears to be essential. Restrictions in the two countries must be complementary. It is useless for Canada to have stringent laws which will protect bird life in its breeding grounds in the Dominion if wholesale slaughter is allowed in the States where the birds go for the winter season. And, of course, it is useless for the United States to enforce rigid protective laws if Canada does not protect the bird life when it migrates north. The United States has proposed a treaty to meet these conditions, and all the provincial authorities in Canada, specially concerned in wild life, have cordially approved the principle of such a treaty.

I have already called attention to the conditions arising out of the war, and the necessity they emphasize of making a survey of Canada's needs and of the resources with which to meet these needs. Canada's wild life is just as much one of her natural resources as her forests, her minerals, or her soil. Sentimental and æsthetic reasons demand the preservation of wild life but, in addition, there are many other important conditions which accentuate this demand. The preservation of bird life is necessary for the protection of Canada's crops. It is estimated to-day that Canadian producers annually lose \$80,000,000 from insect destruction in consequence of the lack of birds to combat the insect army of destruction. Our forests also require the birds to protect them from their insect enemies. Huge areas of Canada's hinterland are immensely valuable as a source of revenue from furs. This industry demands action on lines which will ensure a perpetuation of the supply.

Game birds and the ordinary game animals such as deer and moose are of value as a food supply, but even more so through what they mean in the matter of recreation for the hardworking farmer and the desk-worn city man. There are few things that lure so many people to play and the out-of-doors as wild life. Modern industrial and economic conditions have been doing much to undermine the vitality and efficiency of the human race. One of the important requirements for the welfare of the people to-day is the development of those things which will lure them to some recreation in the out-of-doors in order that bad social conditions may be counteracted and overcome. National parks exist for this purpose, and in this work the parks have no stronger ally than wild life, which seems to call man to the out-of-doors by an appeal to the old primeval instinct of man as he originally was, a hunter and an out-door animal.

Respectfully submitted,

J. B. HARKIN,

Commissioner of Dominion Parks.

APPENDIX No. 1.

REPORT OF CHIEF SUPERINTENDENT OF DOMINION PARKS.

EDMONTON, April 1, 1915.

SIR,—I have the honour to submit herewith my third annual report as Chief Superintendent of Dominion Parks, for the fiscal year ending March 31, 1915, together with reports of the superintendents of the different parks, which are tabulated below in the same order as on previous occasions:—

- (1) Report of Chief Superintendent of Dominion Parks.
- (2) Report of Superintendent of Rocky Mountains Park.
 - (a) Report of the Curator of Banff Museum.
 - (b) Analysis of Nationalities of Visitors to the Hotels.
 - (c) Report of the Alpine Club.
 - (d) Report of Timber and Grazing Inspector.
- (3) Report of Superintendent of Yoho and Glacier Parks.
- (4) Report of Superintendent of Buffalo Park.
- (5) Report of Superintendent of Elk Island Park.
- (6) Report of Superintendent of Waterton Lakes Park.
- (7) Report of Superintendent of Jasper Park.
- (8) Report of Acting Superintendent of Revelstoke Park.

The above reports give in general outline the work accomplished in each park during the fiscal year just closing. The extraordinary conditions which arose during the months of July and August necessitated considerable and immediate curtailment in the programme of improvements which had been planned. The work which it was permitted to carry on was completed in a very satisfactory manner, but as the different undertakings are dealt with fully by the superintendents, it will be unnecessary for me to go into details.

In Rocky Mountains park one of the most important accomplishments was the completion of the new bathhouse. The building is of very pleasing design, built upon the side of Sulphur mountain between the Cave and Hot Springs basin, and adds greatly to the charm of the landscape, in addition to supplying a long-felt want in the way of additional bathing accommodation. In the past, many tourists who desired to patronize the baths have been unable to do so owing to the limited number which could be accommodated at one time. The new bathing establishment is everything that could be desired, thoroughly up-to-date and convenient, and when the season opens next June, I expect the bath will be taxed to its limit during the greater part of the season.

The present building is only half of the plan as projected by the architect; when the other half is undertaken and the grounds below the terrace drained and artistically laid out in conformity with the general rearrangement plans, Banff will certainly be the "Gem of the Rockies."

Considerable improvement in the type of dwelling house is noted in Banff, although the general depression prevailing everywhere prevented the erection of a number of projected buildings.

Several fires occurred in the business portion of the town, resulting in partial destruction of the property, but thanks to the vigilance, organization, and hard work of the local volunteer fire brigade, assisted by the citizens, the damage was chiefly confined to the building in which the fire originated. The fire apparatus is the property of the department and has been considerably improved and added to since

last year. The fire hall has been fitted up and offices provided for the resident engineer and police commissioner. The telephone exchange is to be removed from the present quarters in the Administration building to its new offices in the same building as the fire hall, and the service will be improved and brought up-to-date in every respect.

The sewer and water service is in first-class order, and is being gradually extended to meet the requirements of the increased number of new residences which have been erected during the year. A new 20-inch steel water main has been partially installed and, when completed, will give the town of Banff an excellent water service.

The automobile road from the east boundary of the park to Banff has been considerably improved and now affords motorists from the prairie cities an excellent opportunity to drive through the National park and enjoy the magnificent scenery en route.

This road is being extended and is about completed to Castle, some 17 miles west of Banff. About a mile west of Castle the road crosses the tracks of the Canadian Pacific railway, a short distance farther on it crosses the Bow river over a two-span steel bridge, then winds its way upwards in a series of easy gradients to the summit of the Continental Divide; thence on through the Vermilion pass into the province of British Columbia. This section of the road remains to be completed.

The weather conditions during the season were not of the best; this, coupled with the general financial stringency and great European war, tended considerably to restrict travel and resulted in a marked decrease in the number of visitors registering at the various hotels in the National parks.

Considerable attention has been given to afford visitors and residents every facility for healthy outdoor enjoyment. Additional trails have been opened up, roads have been improved, a recreation ground has been laid out for baseball, cricket and football and other sports. The children's playground has been specially fitted up for their enjoyment, and a commodious building equipped with large kitchen, cloak rooms, and all the necessary conveniences has been provided.

The Bow river is navigable for motor launches for a distance of some 10 miles from Banff and, with the Echo river, Vermilion lakes, and Fortymile creek, affords delightful opportunities for boating and canoeing amid the unrivalled scenery of the mountains.

The outlying lakes and streams, which are fairly well stocked with trout of all sizes, can be reached by pony trail. A fish hatchery has been established to restock the various depleted streams and lakes, and the followers of Isaac Walton will find even better sport in the near future. Taking all these attractions into consideration, not to mention mountaineering, the Rocky Mountains park stands in a class of its own, excelled by no other.

YOHO AND GLACIER PARKS.

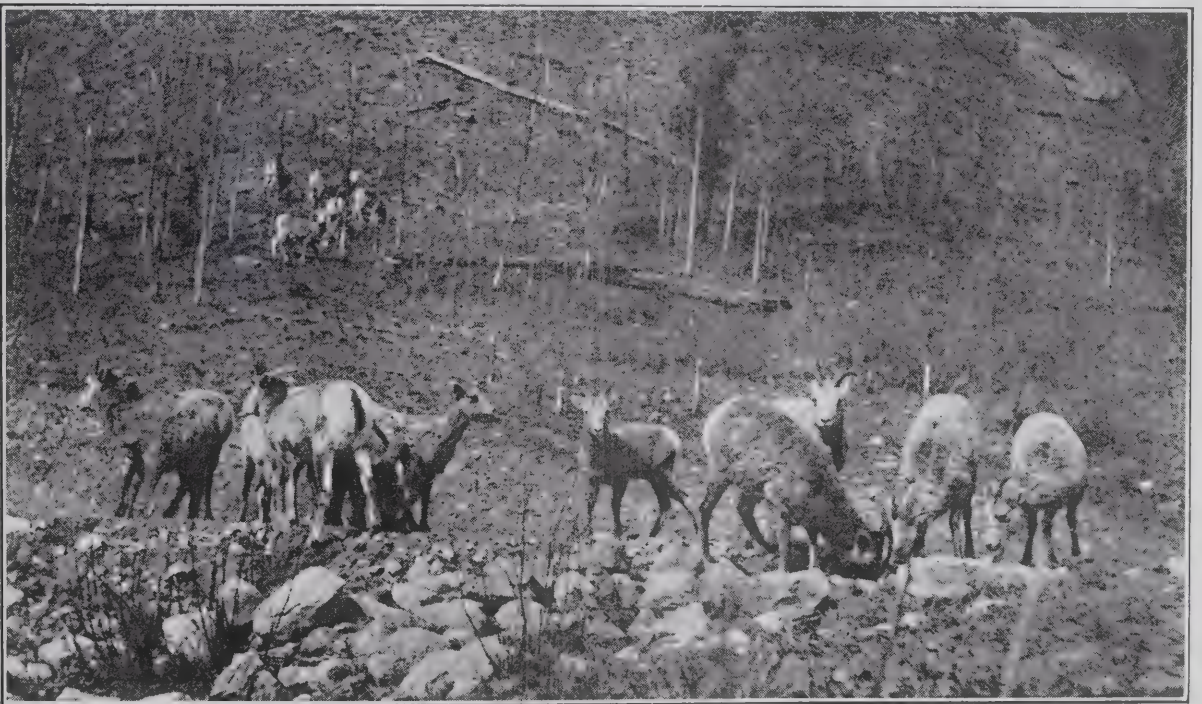
These parks were formerly under the superintendence of Mr. Maunder, who was sent to take temporary charge of Revelstoke park. Captain Russell was appointed in his place, and commenced his duties on September 8.

The usual repairs to the townsite were made during the year, and a new sidewalk was provided to accommodate the residents. The Emerald Lake road was kept in excellent repair by two section men, located in cabins 2 miles apart, which were built for their accommodation. This system of road repair work has given good satisfaction. I am pleased to note that the whole length of the road from Field to Emerald lake is in perfect condition except for a short distance about half a mile west from Field, where the Kicking Horse river has changed its course—an annual occurrence—undermining the cribwork and carrying away the lighter material, but not encroaching upon the road. This will be replaced during the coming season. The road to the Yoho has been very much improved. Two cabins for section men were built, and the first 4 miles have been looked after by these men and kept in excellent order. The Emerald Lake road and this portion of the Yoho road is much frequented by pedestrian tourists, and they have more than once praised the condition of the roads.

Bridges were repaired, approaches to them graded up, the big grade at mile $4\frac{1}{2}$ was abandoned and a new roadway selected and built following the right bank of the Kicking Horse river on a gradually rising grade, the maximum being 10 per cent in the last hundred feet. The new road is shorter by some three hundred feet, and decidedly better than the old one.

The road farther on has been widened to 16 feet, and at the junction of the Yoho and Kicking Horse rivers considerable improvement has been made by throwing the road some 10 feet back on solid ground, blowing up some dangerous overhanging rocks and making an easy turn in place of the sharp short bend.

Repairs on the Switchback are an annual affair, and I should like to see this portion of the road changed and placed on solid footing with an easier grade than at present. The widening of the road along the canyon was not completed owing to the crew having to abandon all work and proceed to fight the fire at Wapta, which at one time threatened to assume alarming proportions.



Flock of Wild Sheep, Rocky Mountains Park.

The Alpine Club of Canada held its ninth annual camp at the head of the Upper Yoho valley during part of the months of July and August. All trails leading to the camp were previously cleared out and put in order. It was found that the waters of lake Duchesnay which were abnormally high had flooded out the trail and rendered it impassable. A new trail was accordingly built on higher ground, and everything was done to enable the members of the Alpine Club to enjoy the magnificent scenery. A visit was paid to their camp, where we were most hospitably entertained and a most enjoyable evening spent round their camp fire. I cannot let this occasion pass without remarking that I never saw a larger or more enthusiastic assemblage, gathered as they were from all quarters of the universe, for the sole purpose of climbing the dizzy heights surrounding their camp, and enjoying the magnificent panorama of the Yoho—a view surpassed by none in our national parks.

GLACIER PARK.

The usual annual clearing of the trails in and around the great glacier was undertaken by a small force of men, and successfully completed. The continuation of the

road to the Nakimu caves was carried ~~forward~~ completed to a point about a mile from the caves. From this point a good trail is available for the balance of the distance.

The Nakimu caves are an attraction by themselves, and when the road is finished and can be used for carriage traffic, the trip will be the most interesting in the Glacier park.

The Canadian Pacific railway grade revision tunnel through mount Macdonald is making good progress, and will probably be completed some time before the end of next year.

BUFFALO PARK.

The farming operations carried on in Buffalo park during the past season were highly successful. Three hundred acres were put under crop, 210 of which were cut for grain and produced over 14,000 bushels of feed oats. Ninety-one acres of green food were cut, and an additional 300 acres broken for next season's crop.

Some 4,000 bushels of grain were shipped to other parks, where they were delivered and stored at a cost considerably less than the market quotation.

A necessary addition was made to the superintendent's residence, at small cost, which will serve as an office and fill a long-felt want. Other small improvements were made to place Buffalo park on a good footing to successfully carry on the work.

Experimental reinforced concrete fence posts were made but not erected owing to other pressing and more important work. If we can secure concrete fence posts at the price given by the superintendent in his report, viz.: three dollars or less, I am of the opinion that it will be good policy to make a contract to re-fence Buffalo park with such posts suited to the requirements of the park.

The question of subdividing the herd of buffalo is growing more pressing each year: in fact, I consider it an absolute necessity for the preservation of the finest type of bison. The animals are now practically in one large herd, with no means of separating and treating them in the event of contagious disease showing itself.

The herd has added to its number and decreased by six from various causes. The total is a very gratifying showing. Many fights have occurred among the herd for supremacy, and many have been lamed; this again tends to show the absolute necessity for separating them, and administering the herd on a similar plan to that of an ordinary stock ranch.

The elk, moose, and mule deer are doing exceptionally well. We were obliged to remove the most of the moose from the home paddock, and turn them into the large park, owing to the browse becoming scarce and needing a rest for re-growth. The antelope do not thrive, which is to be regretted; they now number three, and as there is an area set apart for the preservation of the antelope, I do not think we should make further attempts to raise them in Buffalo park.

ELK ISLAND PARK.

The improvements contemplated and partially carried out are enumerated in the superintendent's report. As more is done in the opening up of roads to give access to that portion of the lake shore, known locally as Sandy Beach, this park will doubtless become an attractive summer resort.

Unfortunately all the work contemplated for this season was not completed, owing to the unusually wet weather in the early part of the year and, later on, the necessity of curtailing expenses on account of the outbreak of war.

Owing to the rank growth of weeds on the new ploughed land, considerable work had to be done to place the main fireguard in first-class order.

The east fence, some four miles in length, was re-posted with posts of tamarack treated with antiseptine with a view to testing the preservative qualities of the latter. During the coming year it will be necessary to renew the other three sides.

A new departure was made in the matter of securing the annual supply of hay for the buffalo herd. Usually it has been put up by contract; this year machinery was purchased and the force of men working in the park was employed to put it up, so that some 200 tons were secured at a lower figure than the usual contract prices.

The park is well patronized by visitors from all parts, and no doubt if greater boating and canoeing facilities were provided on the lake, it would add materially to the attractions of the place.

The buffalo, elk, moose, and deer are in fine condition. The buffalo have added sixteen to their number; one old bull was killed to save the head and robe, making some ninety-seven in the herd. The moose and elk in this park are exceptionally fine animals, and if we had facilities for trapping some of them it would be a move in the right direction to do so and ship the males to improve the herds in the other parks. As the buffalo and other animals are increasing, I would strongly urge the extension of the boundaries of the park in a southerly direction. The lands to the south are not so heavily timbered and would make excellent pasture land for all the animals now in the park and, in addition, a considerable number of elk and deer which are known to range in the area to the south and frequently come up to the present park boundary could be secured.

WATERTON LAKES PARK.

The improvements in this park were chiefly repairs to roads in the immediate vicinity of that portion of the area adjacent to the middle and upper Waterton lakes. The boulevard facing the bay at the south end of the upper lake was also cleared of the heavy and dense undergrowth, and made accessible.

The area of the park was enlarged during the summer from 13.5 to 423 square miles. Up to that time it has been under the care of Forest Ranger John George Brown, more popularly known as "Kootenai Brown," one of the oldest of old timers, and a typical frontiersman. In view of the greatly increased area to be administered it was decided to appoint a superintendent, and Mr. Robert Cooper was appointed to this office in September, with headquarters at Waterton Mills. Temporary buildings were improved to accommodate the administrative staff.

A chief fire and game warden, Mr. G. Allison, and three additional wardens were appointed to enforce the fire and game regulations. Later, owing to the short notice given of the enlargement of the park and the inclusion therein of the area formerly open to hunters and trappers, it was found necessary, for the proper preservation of the game to increase the number of wardens by the appointment of three additional men to the temporary staff. Owing to their vigilance and untiring zeal, combined with considerable tact, the chief game warden and his assistants had to prosecute in two cases only. Shortly after the close of the hunting season, the services of the temporary wardens were dispensed with.

A wing of the new hotel, which is being erected by Mr. J. Hazzard, was completed and opened to the public, thus supplying a long-felt want. Other buildings and improvements are contemplated; but development is necessarily slow, owing to the cost of hauling building material from the nearest railway—a distance of some 40 miles.

Excellent fishing can be had in the numerous lakes and streams that abound throughout the park.

Considerable work will be necessary in the matter of roads and trails to properly develop the park and make the numerous scenic points accessible to the tourist. A main road should be built from the north to the south and made available for motor and general traffic, and a junction formed with existing roads leading across the provincial boundary into British Columbia, also across the international boundary to the United States Glacier National park.

JASPER PARK.

During this year the boundaries of Jasper park were extended from 1,000 to 4,400 square miles. The area added abounds in game of all kinds.

The patrol of this vast area will necessitate the augmentation of the present force of fire and game wardens; also the re-allocation of the territory of the present wardens, in order to patrol it economically. Numerous new trails will require to be projected and built, and should be so planned that they can eventually and gradually be cheaply widened to form a net work of roadways for rapid intercommunication, suitable for motor traffic.

On alighting from the Grand Trunk Pacific train at Jasper, the tourist is at once struck by the picturesque Administration building which stands out conspicuously immediately north and at a short distance from the station. Considerable improvement is also noticeable in the business and residential portion of the town.



Crevasses on Mount Robson.

Photo by W. J. Topley.

Excavations for the foundation of the palatial hotel to be constructed by Mr. Weiss, of Minneapolis, were commenced, but owing to the financial stringency, further work has been abandoned.

The grading of the avenues and streets has been partially completed. Considerable difficulty was met with, owing to the large number of enormous boulders and rocks which are thickly strewn all over the townsite. This made necessary a large amount of blasting and special appliances for the economical carrying out of the work.

The main road to the Athabaska crossing was finished, and a pile bridge was constructed over the river. This bridge was much damaged during high water, and temporarily repaired, but it has been further improved and it is hoped will stand until a permanent steel bridge is erected at the site selected, a short distance above the present structure.

The road from here to Maligne canyon is partially completed, and a commodious shelter, consisting of three rooms (two sleeping, and one living, with stove in latter) for the accommodation of the tourist has been built. Various trails have been constructed with a view to intercommunication in case of forest fires, also to enable the tourist to visit the various scenic points of interest in the outlying portions of the park. These are enumerated in the acting superintendent's report, therefore it is not necessary for me to further dilate upon them.

Although considerable labour and expense have been entailed in the construction and re-location of portions of the old trail from Pocahontas to the hot springs, practically nothing has been done to improve the very crude accommodation for the numerous invalids who make the journey to the hot sulphur springs in order to benefit from their healing waters.

We now have the two transcontinental lines completed through the park, and during the coming summer expect the Canadian Northern railway will inaugurate a regular train service over their system, thus bringing additional tourists to explore and enjoy the beauties of Jasper park.

Amongst the distinguished visitors who explored the scenic grandeur of the park were Sir Arthur and Lady Conan Doyle; the Hon. Frank Oliver, and many others, who were charmed with all they saw.

The protection afforded to game of all kinds has resulted in a marked increase. The sheep and goats peacefully graze on the mountain slopes, and before long I anticipate they will be as indifferent to the presence of man as are the animals in the Rocky Mountains park at Banff.

A fire hall was built, a horse-drawn chemical engine purchased and installed. One fire occurred, which resulted in the destruction of a frame building occupied by the Royal Northwest Mounted Police. The efficiency of the volunteer fire brigade prevented the fire from spreading beyond the building in which it originated, and doing further damage.

A telephone line has been constructed for fire protection purposes, and eventually as the town grows in size it is hoped to install a system for the accommodation of the residents of the town of Jasper.

REVELSTOKE PARK.

In the spring of 1914 the Dominion Parks Branch decided to set apart 100 square miles of territory and add it to the district known as "Victoria park," north of the city of Revelstoke, including mount Revelstoke and other mountains. The Provincial Government had already made a survey of the route to the summit, and later had begun to construct a road. The Dominion Government then decided to continue it to the summit, and it was begun in July, 1914. The total length of this road, when completed, will be about 15 miles, and the area of the proposed park will take in some forty-eight sections, or 30,720 acres of rugged scenery. This land is of no use for agricultural or building sites, but eminently adapted for scenic purposes.

A pony trail has been built by the council of the city of Revelstoke from the town to the summit of mount Revelstoke, and some 4 miles beyond, to an elevation of 6,500 feet, and when I first visited the spot in September, 1913, it was over this pony trail that I travelled to reach lake Miller and lake Eva, and a cleft in the mountain, known as the "Everlasting Ice-box." A portion of the trail goes along the side of the mountain, where, beneath a heavy fall of rock, can be heard a stream rushing below known as the "Subterranean river." Lake Miller is a small lake, covering some 30 acres, surrounded by mountain tops, and with an island in the middle. The water is of an indigo blue, and reflects the mountain, making a beautiful picture. A fall of water can be heard but not seen, as it apparently runs under the mass of loose debris and enters the lake at the north end. Farther up is lake Eva, practically on the summit of the mountain; at the north end of the lake is an outlet over which the water falls in

a silver thread, with a vertical drop of about 1,300 feet; it then later joins the stream which issues from the Gordon glacier. The view from the top is one of the finest obtainable, with snow-clad peaks, ice-fields, and lakes, and the Columbia river in the distance.

Some 500 persons ascended mount Revelstoke last season; the number was considerably more this year, but that many more will do so when there is a fine automobile road of about 15½ miles, winding up the mountain, from the summit of which such a splendid panoramic view is obtained, can easily be imagined.

The automobile road was begun during the second week of July, and on September 1, when the work unfortunately had to be closed down, over 2 miles of new road had been completed and opened for traffic, with the necessary bridges, culverts, and cribwork, and a large amount of work partially completed on the third and fourth mile. Had sufficient funds been available, the second 2 miles would have been completed before the middle of September.

A ski club was formed in Revelstoke this winter; ski-ing is now the favourite pastime, and every other person you meet, young and old, has a pair of skis. A ski carnival and jumping competition was held in February on the slopes of mount Revelstoke, which about 2,000 people attended. Mr. Grant Hall, of the Canadian Pacific Railway, was there and he was so interested that he took away with him some of the moving-picture films to have them developed. The officials of the club have chosen a hill on the slopes of mount Revelstoke, lying north of the hospital, which they say is equal to the famous hill in Blumendal in Norway, where all the world ski-jumping records are broken. The club intends, if possible, if the automobile road is completed, to hold a carnival on the summit of the mountain during the month of May or June.

I would strongly recommend that the work on the road, if conditions allow, be recommenced early this year as the Canadian Pacific railway have employed their representatives to take photographs of the park for moving-picture films, and the Soo line are advertising this park with a view to attracting the many visitors and tourists who will this coming season pass that way to and from the Panama-Pacific Exhibition at San Francisco. Many of these will no doubt stop off to see the beauties of this spot, and it will be very disappointing if the road, as advertised, is not completed to enable them to reach the summit. Owing to the unfavourable conditions on account of the war which exist and will continue, labour is still plentiful and work scarce, and this road would give employment to many in the neighbourhood.

I would also recommend that the boundary line of the park be fixed, as it will assist in the enforcement of the parks regulations and in any local improvements and developments.

All of which is respectfully submitted,

I have the honour to be, sir,

Your obedient servant,

P. C. BARNARD-HERVEY,

Chief Superintendent.

APPENDIX No. 2.

REPORT OF THE SUPERINTENDENT OF ROCKY MOUNTAINS PARK.

BANFF, ALTA., March 31, 1915.

SIR,—I have the honour to submit my second annual report as superintendent of Rocky Mountains park for the fiscal year ending March 31, 1915.

The tourist traffic for the season has not been up to the average, the only month which compared favourably with any of the summer months of recent years being July. This was partly due to the cold weather of the earlier part of the season, and later to the outbreak of war.

So far as development work in the park was concerned, we were able to accomplish a good deal before the war was declared, when all but emergency expenditure was necessarily cut down. We were able to do much in the way of road and trail-making and repairing, the details of which are dealt with elsewhere. Our water and sewer systems are in thoroughly good order; the water is up to the highest standard of purity and clarity in the Dominion, and our sewer system is the admiration of all strangers who come to Banff expecting to find conditions much the same as in other towns of a similar size.

We held one sale of lots in the spring, at which there was a good attendance and considerable competition. Our new telephone system, continuing the connection with the long-distance provincial telephone, will probably be in operation early in 1915. Our zoo and the animals in the Buffalo park are flourishing, although we have had some regrettable losses during the year, and generally speaking, all departments in the year-round life of the park are in perfect order.

Before going into details of the year's work and happenings, let me add that I am grateful for the loyalty of all the officials and employees who take directions from me and who have done their work whole-heartedly throughout the year.

I regret to record the death of the oldest office employee in the park, viz., Mr. D. C. Macdonald, who died in the month of October, after a short illness. He had been in charge of the revenue for some four years, and was a great favourite with everyone and exceptionally faithful in the performance of the multifarious duties of his office.

BUILDING CONSTRUCTION.

Building construction both by residents and the department has not been so brisk nor so long sustained as last year, the only outstanding building of any importance built by the department being the new bath-house.

The Lux block, which was partially destroyed by fire in February, 1914, has been rebuilt to a height of one story, the construction being fireproof throughout, and the intention is to add two more floors when the opportunity offers. This building has added greatly to the appearance of the main avenue.

During the year a first-class fire limit has been marked off in Banff, taking in half of blocks I and II, with the north and south boundaries denoted by the lanes intersecting these blocks.

SEWER AND WATER SYSTEMS.

Both the sewer and water systems of Banff are in excellent repair, and seventy connections were made during the year, including both water and sewer.

Continual care is exercised with regard to draining out pipes and seeing that they are laid below the frost line, so that little or no trouble was experienced on account of frozen pipes.

The water supply, which is periodically analysed, continues to be of the highest quality both as regards purity and clarity and, even in the heat of summer, the water is invariably icy cold.

AUTOMOBILE ROAD AND AUTOMOBILES.

Early in the month of August the two sections still uncompleted of the new automobile road in Rocky Mountains park were let to a firm of contractors who lost no time in putting large gangs of experienced men on the work.

When this road is finally completed and opened for automobile traffic, next



On the way to the Upper Hot Springs, Rocky Mountains Park.

year, there is no doubt that there will be a much greater influx of visitors travelling by automobile from both east and west. It is understood that the department intends altering the regulations so as to allow greater freedom in the movement of cars throughout the park, and especially those visiting Banff.

The number of automobiles registered at Banff during the year was about 250 as against 173 for the previous year.

ROADS.

Apart from the construction work on the automobile road, a good deal of repairing was done during the year. The Bankhead road was raked and dressed from the railway to Banff avenue; the road along the Bow river to the fish hatchery was reggraded after the 20-inch sewer was put in, and top-dressed with crushed rock, and the right of way cut back and cleared of underbrush, while similar work was done down to

near the Spay bridge, on the road from the Banff Springs hotel and from the hatchery via the middle avenue, known as River avenue down to the bridge and via the boat-house to the recreation grounds. All these roads are in splendid condition. When the work has been completed on Cave avenue, so far as regrading is concerned, following the putting in of the 62-inch main to the Cave and Basin, it is proposed also to top-dress this road with crushed rock.

The crusher has been kept at work at the foot of mount Rundle fairly steadily during the year, and is doing satisfactory work so far as the material turned out is concerned.

On the road from lake Louise to Moraine lake—the only road suitable for tally-ho traffic in this district—a considerable amount of work was done before orders were received to cease operations. The high banks at the Moraine end caused many slides which imperilled the safety of all kinds of vehicular traffic, and the material so displaced was used for re-surfacing purposes. The turning point at the end of Moraine lake was re-dressed and widened; large stones were raked off, and the road for a distance of about 2 miles from the lake was put into good condition. This was easily the worst part of the road, but much yet remains to be done at places along the entire 10 miles before it can be called a good and safe road, and I hope to be able, financially, to undertake the completion of this work next year. Owing to the spring freshets bringing down large quantities of material upon parts of this road every year, it will be absolutely necessary each spring to send at least two men to clear the boulders and other mountain-side material from the surface before the tourist traffic begins.

In the course of carrying out the general work of repair on this road the gang re-floored three or four of the small pole bridges across creeks, and cleared a good deal of encroaching underbrush.

The road from the Chalet to Lake Louise station was also carefully raked over.

In the month of May a good deal of cutting back of underbrush was done near Exshaw and on the Hot Springs road.

When the contractors at the Cave and Basin had done their part of the grading, there was a space of about 20 feet farther to be done by the department, which was completed about the beginning of December. I would recommend that a guard-railing of substantial design be erected at the corner of the new bath-house for the protection of rigs and children, as there is a very steep incline down to the level of the river at this point.

TRAILS IN THE PARK.

A large amount of work was done in connection with the extension of the network of trails throughout the park, a sum approximating \$4,000 having been expended on this work.

During the summer, contracts were let for four trails, which will open up many attractive routes hitherto open only to the experienced woodsman. These trails are:—

	Miles.
From Carrot creek to lake Minnewanka.. . . .	12
From Red Earth creek to Simpson summit, via mount Ball... . .	17
Little Pipestone to head of Red Deer river.. . . .	4½
Castle-Vermilion road to Twin lakes.. . . .	4½

making a total of 38 miles of new trails. Added to this is 2½ miles of what will ultimately be a 5-mile trail from Boom Creek bridge to Boom lake, which will be completely built by our own game wardens, and which, when finished, will be an easy means of access to one of the very finest sheets of angling water in the Rocky mountains.

DEPARTMENT OF THE INTERIOR

TOTAL MILEAGE OF TRAILS IN THE PARK.

	Miles.
Spray to mount Assiniboine..	18
Banff to Spray lakes and Eau Claire wagon road..	28
Bow summit..	30
Banff to Fatigue creek..	19
Pipestone trail..	28
Cascade (Sawback to Bankhead)..	28
Mount Edith trail to Sawback lake..	24
Lake Minnewanka trail..	14
Banff to Simpson summit..	14
Canmore to Whiteman's pass and Spray lake trail..	4
Tunnel mountain trail..	1½
Sulphur mountain trail..	3½
Carrot creek and lake Minnewanka..	12
Red Earth creek and Simpson summit via Mount Ball..	17
Little Pipestone to head of Red Deer river..	4½
Castle-Vermilion road to Twin lakes..	4½
Boom creek bridge to Boom lake (2½ miles completed)..	5
Total..	255

During the year our own wardens also did the usual work of clearing trails of fallen timber and encroaching brush, and it may be stated generally that all trails were in good condition during the past year.

Among other work to be undertaken next year, if the financial situation will permit, is the corduroying of the Bow trail, a distance of about 30 miles, at an approximate cost of \$1,000.

GAME WARDENS' CABINS.

Closely allied to this question of trail building is the matter of game wardens' cabin accommodation. At the beginning of the year we had nine of these in commission, and during the past twelve months five more were built by our own men and equipped for all emergency. The value of these cabins in the forest service can hardly be overestimated. They enable the men to almost indefinitely prolong their patrols when, in other circumstances, they would be compelled to return to their own or some other habitation each night.

The cabins are not locked up; they are available to all travellers by the way, the only stipulation being couched in the following language:—

“This cabin is for the use of the fire and game warden. In his absence it may be used by campers, but must be left clean. Any person who takes from this cabin any tool or utensil, except for the purpose of fighting a forest fire, is liable to a fine of \$100.”

There have been no cases of any abuse of the privilege so granted, although it is largely taken advantage of according to the popularity of the particular trail upon which a given cabin may flank.

Some six or eight more of these cabins are projected for next year, and I hope the time will come when they will all be linked up with the game warden's telephone system.

INSTALLATION OF 20-INCH STEEL WATER MAIN.

The waterworks system of Banff is being rapidly extended to meet the necessities of the continued growth of the town, and it has now reached a size that makes the 10-inch main from the intake on Fortymile creek inadequate for the purposes required.

In 1905 the waterworks system for Banff was first planned and constructed. Water was taken from a small reservoir made by a loose-rock, crib-core dam on Forty-mile creek, at a point distant 2½ miles from Banff as the wood stave main ran. Forty-

mile creek flows between Stoney Squaw mountain and Cascade mountain. This wood stave main was placed with an average coverfill of 3 feet, and where it has been exposed during recent construction operations it has been found to be in a remarkable state of preservation.

The water obtained from Fortymile creek is excellent in quality, and continues so throughout the year, with no trace of discolouration and sedimentation in flood periods.

The 20-inch steel water main proposed was to be considered as an auxiliary supply supplementing the existing 10-inch main, which was to be left in operation. When the construction of the 20-inch main was almost completed it was decided to install a concrete intake works with three sets of racks and screens adjacent to the existing dam, provision being made for the future construction of a concrete dam of greater height to replace the present loose-rock, crib-core dam. The existing screen chambers on the 10-inch wood stave line have been abandoned, and the intake for the 10-inch line has been incorporated in the concrete intake now constructed. Adequate provision has been made to avoid the difficulties due to surface, frazil, and anchor ice during the winter season. A masonry house has been built over the intake works so as to provide ample protection to the sluice gates, and also for an operator during the winter season should one become necessary.

The 20-inch main parallels the former 10-inch main for a greater part of the first mile of distance from the intake. At two points where the 10-inch line follows the base of Cascade mountain it has been buried in large rock slides. To avoid these the 20-inch line was carried across Fortymile creek and follows the west side for 1,300 feet, where it crosses the creek to the east side again. At the most southerly point of Cascade mountain the 20-inch line leaves the 10-inch line and runs due southwest through the goat pasture, passing under the Canadian Pacific railway tracks, across the old moose pasture, under the Bankhead road, and instead of diverting towards Banff continues directly up upon the easterly shoulder of Tunnel mountain, terminating here in a small standpipe, adequately protected from frost, to act as an overflow medium. Ultimately, it is intended that a balancing tank be built to replace the standpipe and to serve the same purpose as the one originally built at the end of the 10-inch main on the shoulder of Sulphur mountain above Banff. "Without such a tank, acting as a balancing chamber, a sudden demand for water such as might be made when a fire occurred would at the outset tend to draw the water from the pipe system and thus reduce the pressure at a time when most needed, until the flow in the long system regained its flow conditions. The tank, open to the air, also obviates air troubles and water-hammer in such a long pipe."

The present town distribution system is connected with the 20-inch main by means of a 10-inch cast-iron branch line, running from a cross on the 20-inch line westwards along the Bankhead road to an intersection with the former 10-inch main at Fox street.

Ultimately it is proposed to carry the 20-inch line on past the balancing tank around the east side of Tunnel mountain towards the Canadian Pacific railway hotel to connect finally with the upper end of the distribution system of the town in that locality.

On December 24, 13,000 feet of 20-inch steel pipe had been laid and 1,335 feet of 10-inch cast-iron pipe, and all pipelines completed, including four 20-inch gate valves, two 6-inch blow-outs protected by concrete houses, and two air valves, besides smaller valves and specials. The intake works, a later development, under way at this time was completed during the winter, and the 20-inch line put in operation.

The 20-inch pipe has been covered throughout with 5 feet of material, and is amply safe against frost. Special attention has been given to the back-fill and cover-fill over the pipe, and to the proper bedding of same. The line has been thoroughly tested, partly under water pressure and partly under air pressure.

The usual construction difficulties have been met and overcome. The section between the Bankhead road and 200 feet north of the Canadian Pacific railway pre-

sented unusual difficulties, due to the presence of five small flowing creeks, clay impregnated with water, and quicksand in places. This section delayed completion of the work by about three weeks.

CLEANING UP THE TOWNSITES.

The annual clean-up or "Arbor Day" was fixed for May 6 for all townsites in the park except Banff, which held its annual clean-up day two days later.

There was a most gratifying response throughout the park, both by the general public and our own officials who had charge of the hauling of the gathered débris, and the result had a great deal to do with the generally clean and neat appearance of all the townsites during the season. Especially was this the case in regard to lanes and yards where débris, often of a noxious and fly-breeding character, is wont to gather. It is intended to make the clean-up day an annual event.

Mention might also be made, under this heading, of street cleaning and garbage collection, which is well organized in the town of Banff. The former has been most effective in conjunction with the sprinkling of the streets, in the laying of dust.

No concerted official action has yet been taken in connection with the institution of similar services in other towns in the park, but periodical reports show that the residents in these towns are paying more attention to sanitary measures, and with the exception of one or two isolated cases with regard to household and stable garbage, there have been no complaints during the year.

In connection with the tidiness of the towns, there might also be mentioned the general floral and other beautifications of the town of Banff. From the Banff Springs hotel to the eastern end of Banff avenue, and on streets leading right and left therefrom, there has been a gratifying increase in the number of well-trimmed lawns and flower gardens, while a number of well-stocked kitchen gardens have been made. The boulevard in the centre of Banff avenue and the remodelling of the grounds at the R. N. W. M. P. barracks have added greatly to the first impression which visitors get of "Beautiful Banff."

SALE OF LOTS.

Only one sale of Banff lots was held during the past year, the autumn sale being passed over on account of the unfavourable financial situation. On May 16, seventy-four lots were offered at public auction, of which fifty-five were sold. Of the buyers all but very few completed the purchase, price and paid the first year's rental, and not a few have begun building towards the completion of the year's agreement.

ELECTRIC LIGHTING OF BANFF.

Early in the year it was proposed to extend the street lighting system in the town of Banff, the additions to be made in such a way that when our own proposed power plant materialized, the system could easily be linked up with it.

The proposed extension called for 441 lights in addition to those already existing, 181 of 60-watt and 260 of 100-watt, and the distribution was carefully figured out and recorded. Such an extension would make Banff the best lit town of its size in the west, and I hope the work will soon be undertaken, whether the rate adopted be a flat one or determined by meter. The total cost of this extension would approximate \$6,000, but I believe it would be money well spent. The cost of maintaining this service has not yet been ascertained, but a time table varying twice a month all the year round has been drafted and, with some allowance on the side streets for moonlight nights, will probably be adopted.

In connection with this proposed extension there has been submitted for examination a well designed standard to carry five-lamp clusters, intended to be placed on the grass boulevard on Banff avenue.

The wires have been extended to the new bathhouse, and the lighting tried out with completely satisfactory results. There are approximately 900 lights at the Cave and Basin premises, which give a very brilliant effect after darkness.

An extension which will be required in the very near future if all-the-year-round use is to be made of the building, will be to the recreation pavilion. It appears that the shortest route to this building is along the river bank, via the boat-house, and as the building is already wired the cost of such an extension would be small.

NEW BOW RIVER BRIDGE.

The Public Works Department started the preliminary work necessary to the erection of the new concrete bridge across the Bow river at the end of Banff avenue about the latter end of November, when the river had fallen sufficiently to permit of the work going on. The preliminary work consisted of the erection of pile piers at a spot about 80 feet east of the old site of the bridge, and the sliding of the four iron spans to these new piers. This somewhat hazardous work was expeditiously and carefully carried out without accident, the whole bridge being on its new site and ready for traffic by the end of January. In the meantime the ice on the river was in fine condition for traffic between the two banks. It is hoped that the new bridge will be completed during the coming year.

OTHER BRIDGES.

Repairs were effected during the year to Canmore bridge, to two bridges at Anthracite, and the Spray River bridge at Banff, while on the Lake Moraine road from lake Louise a number of small pole bridges were re-floored.

MACHINE SHOP.

All the material and appliances for the new machine shop at Banff have been on the ground for some time, but have not been installed owing to the temporary lack of access to the premises in which it is proposed to place them. This disability is expected to be overcome during the present year, and the employees of the department will be able to undertake a considerable amount of repair and construction work for which outside help is now necessary.

THE NEW LAUNDRY.

In the month of May the machinery necessary for the installation of a new laundry arrived at Banff, and was stored, pending the evacuation of the bunkhouse at the Cave and Basin by the contractors. Part of this building, when it has been properly finished, will be used to house the plant which is designed to handle all the laundry work of the department at Banff.

Hitherto this work has been done by hand on the respective premises at considerable expense, and it is expected that the new laundry will do the work more rapidly, efficiently, and economically than was possible by the old method. The linen will be collected periodically from all the departments having such work to do, and distributed within a stated time, and I think the institution should be a great convenience.

BANFF CEMETERY.

Several improvements have been made in and at the Banff cemetery. The ground has been surrounded by a fence of an uncommon and artistic rustic design; the cemetery has been thoroughly tidied, and when the new survey has been approved by the Surveyor General, everything will be in first-class shape.

TELEPHONES.

Contrary to expectation, we have not yet been able to get the new telephone exchange and extended system installed. All the poles for the extended system have

been erected in the lanes throughout the town, tending to diminish the ugliness caused in cities by erecting poles on the principal streets. The other material is on hand and the building is ready for the installation as soon as conditions permit.

The only connections made during the year were to lines already carrying one or more telephones, as the board in use was already filled, precluding any further single instrument connections. A line was run from the Bankhead line to the house occupied by the keeper of the buffalo paddock and to the water supply intake.

There is now a line direct from the office of the Meteorological Observer to the Observatory at the top of Sulphur mountain which, in addition to being a convenience to the observer, is of great help to the fire wardens during the dry season, when a man is usually stationed on the top of the mountain in order to watch the surrounding forests.

GAME WARDEN'S TELEPHONE SYSTEM.

A start was made during the year with the construction of a telephone system for the game and fire wardens, and when the scheme is brought to a successful conclusion there will be a network of telephones throughout the area which they patrol.



Mule Deer in Townsite of Banff.

A line 28 miles in length has been constructed to Canmore, and another, 9 miles in length, connects the warden's cabin at the east end of lake Minnewanka with the other end of the lake.

CAMPING IN THE PARK.

As in former years, there was a large number of campers in the Banff district, and elsewhere throughout the park during the summer of 1914, and I believe the year to have been a fairly average one in this connection.

The old public camping ground at the junction of the Bow river and Fortymile creek on the Canadian Pacific Railway ground was abolished this year, but the department gave permission to intending campers to pitch their tents in any place approved by the chief warden and endorsed by the superintendent, which compensated for the abolition of the old well-known camping ground. The following are the

fees for permission to erect tents: \$1 per month per tent on public ground for ordinary all-canvas tents; \$1 per month per tent for shack tents on public ground, the first month's rental to also cover the building permit necessary in the case of these tents; \$1 for a building permit to erect shack tents on privately owned lots, this to cover all charges for the season. There is no charge for plain canvas tents on privately owned lots.

The two most popular locations of the year for campers were on the line of the automobile road across the railway and up the Spray river on the north side of the bridge, while at least one large party selected a site close to the Middle springs, from which there is a good and short trail to the Cave and Basin.

VOLUNTEER FIRE BRIGADE.

There has been a volunteer fire brigade in Banff for many years, and although the organization was always to be depended upon to do its best when called upon, the facilities at their disposal for fire-fighting purposes were not commensurate with the progress of the town, both as regards the class of buildings and their increasing number.

I have nothing but the greatest praise for the men who form this volunteer organization. I have watched them turn out on many occasions during the past year, and was highly gratified with the apparent training which they have received, and with the smoothness and celerity with which every man takes his place. I should say a fair average for the turn-out of the chemical and the big hose-wagon is three to three and a half minutes. On the occasion upon which Chief Stenton rang in a trial call from the Banff Springs hotel, without previous warning, the brigade was at the hotel with the apparatus in eleven minutes.

The apparatus at the fire hall consists of one double hose-wagon, two hose-reels, one chemical engine, with the necessary horses, coats, helmets, axes and other appliances.

RECREATION.

The facilities for healthy out-door recreation in the park continue to be of a very high order, and are probably unsurpassed in any national park on the continent.

Apart from the well-planned pony trails all over the park area, giving opportunity for pleasant horse-back outings in air of intoxicating clarity, we have all-the-year-round swimming in the government baths, and splendid boating opportunities.

In spite of the fact that the number of visitors was rather less than in previous years, all these facilities were largely taken advantage of, although the liverymen had a poor season in the pony-hiring business.

Twenty-one hunting and exploring parties, according to the official register, outfitted at Banff, but that number by no means included all the parties who made Banff their rendezvous for trips in the mountains, but refers only to those parties who took out packers and guides with them.

No cases were reported of parties travelling in the park with unsealed firearms.

ANGLING.

The only legal killing sport in the park is that of angling.

I would suggest that, for comparative purposes, we might inaugurate some kind of a voluntary system of reporting the different catches on the various lakes and streams within our boundaries, as any figure which might be given at present must be based on mere guesswork.

So far as I am able to judge, the angling season was fairly successful in the streams, and especially so on the outlying lakes accessible, in the latter part of the journey at any rate, by pony trail only. The streams and lakes in the vicinity of the

various towns within the park and in the vicinity of the various hotels and camps are always very heavily fished, and, notwithstanding the benefits of re-stocking which will increase as the years go by, I would suggest for your consideration the advisability of shortening the season, or at least of changing the dates between which it endures. This would have the effect of putting a stop to the wholesale killing of spawning fish at the end of the season, and would be no hardship to anyone.

Lake Minnewanka continues to give fine catches by trolling and occasionally by the fly around the deep-edged pools; but lakes Louise and Moraine are practically entirely depleted, the nearest good fishing from lake Louise being probably Consolation lake. The going to this lake from Moraine is good either on foot or by pony, but after the end of the trail is reached there are enormous boulders to clamber over before the water is attained, and this probably is one of the reasons why the fishing is usually excellent on this sheet of water.

The Bow river from Castle mountain right down to the Gap is diligently fished from the beginning to the end of the season by tourists and residents, and good catches are by no means uncommon. When the fish hatchery, which has already done good work, has been in existence for a few years more, we may expect satisfactory results from the large number of young fish that will be annually turned into the lakes and streams in the park.

RECREATION GROUNDS AND PAVILION.

Work on the new recreation ground proceeded smoothly during the year and was almost entirely completed by the time orders were given for the shutting down of practically all work, early in September. Those who remember the large noxious slough on the river side of Cave avenue which was famed for the number and varieties of its mosquitoes, will have difficulty in recognizing the place now.

The sewer ditch completed last year was opened into the new 20-inch sewer main, and a few weeks thereafter the ground was as hard as any piece of ground in the district. In addition to the gratifying diminution and almost total extinction of the mosquito pest, which was the stumbling block to the building of new residences along Cave avenue, there has been opened up a recreation ground which is a splendid asset to the district, and which has become a very popular rendezvous for residents and visitors alike, and more especially for the young people.

There are a baseball diamond, a football pitch and a cricket crease; space for field sports of all kinds, and a complete set of playground apparatus for the use of the children. It is estimated that of the last named more than 100 visited the playground every day during the open season, while the football pitch was in much demand by the local players.

As will be seen from a scrutiny of the number of visitors registering at the pavilion the building was largely patronized. It has, however, to be kept in mind that many visitors to the place did not register, and a conservative estimate puts the actual number of visitors at more than double the number recorded.

I have no doubt the building will be in much greater demand in the years to come. As a dancing hall it would be hard to beat, while the conveniences existing for social gatherings are complete in every detail.

Two excellent roads lead to the grounds and the pavilion one via the boat-house, and the other branching off Cave avenue a few hundred yards from the bridge.

WINTER SPORTS.

The Bow river was frozen over as usual during the early part of December, and hockey, curling, and skating were general throughout the season. No heavy fall of snow occurred until the first week in January, thus shortening very considerably the snowshoeing, tobogganing, and sleighing season. The toboggan slide, which is always

a prominent feature of the winter season in Banff was got into operation about the middle of January. Owing, however, to the general depression prevalent in the west, the season was not so successful in point of number of patrons as in the immediately previous years, although the local people were as enthusiastic as ever in all branches of winter sports. The game of curling received a big fillip, for various reasons, and the bonspiel was attended with the usual success.

BOARDS OF TRADE.

The Board of Trade in Banff showed commendable activity during the year in the discussion of matters affecting the locality, including the employment of labour, and other kindred subjects.

Arising out of discussions at the Banff board meetings, one great improvement has been carried out, viz.: the numbering of the houses on the various streets in the town. It was an improvement which cost very little, yet which will be a great convenience to visitors to the town in the matter of locating addresses.

During the year a similar board has been formed in Canmore, with the object of furthering the trade of the town, and its general welfare.

MILK INSPECTION.

The periodical inspection of the milk supplies available for public consumption has been undertaken by the government storekeeper, who has had experience in that direction, and the analysis made on the occasion of each individual inspection has invariably produced satisfactory results. In no case has the percentage of fat been below the statutory requirements, and formaldehyde has only once been reported as being present in the liquid.

CONTROL OF DOGS.

For some years when the number of dogs in the park were less numerous, the regulation regarding license fees and dogs running at large became very much of a dead letter. This resulted in a gradual increase in the number of dogs until they became somewhat of a nuisance so far as chasing game was concerned. There were no, or very few, concrete cases to take action upon, but the fact remained that there were general complaints in this direction. It was therefore decided to put the regulation again into active force.

For the purpose, a dog catcher was employed for three months and placed on the game warden's staff, and during the summer he collected nearly a hundred fees, besides, with the consent of the owners who did not care to pay the annual fee, destroying a large number of animals. The annual license fee is \$3 for the male and \$5 for the female.

FOREST FIRES.

Technically, the fire season begins according to the Railway Commission, on the 1st of April each year, when the railway company and our own staff are supposed to put on patrols. This was too early, however, for Rocky Mountains park, but when the dry season did arrive, the patrols did effective work. Indeed the only three fires of the slightest consequence that we had during the year were those which occurred at lake Minnewanka, on Fortymile creek behind Stoney Squaw mountain, and at the side of the railway near Laggan. This last fire occurred at a time when the railway company's patrol had been taken off by the general superintendent of the Alberta division of the Canadian Pacific railway, without the permission of the Railway Commission. The damage done by the three fires was practically nil, the only real damage being done behind Stoney Squaw mountain, where a quantity of second-growth jack pine was destroyed. We had, however, to keep two or three men at this spot for some weeks in order to make sure that the fire did not get beyond the guard again. Copious rains, occurring about the end of August practically made danger from forest fires negligible.

THE PARK AND THE WAR.

The various towns and districts in the park did well as regards their share in the war, not only in men, but in money and in kind. The complete statistics for the whole park are not available, but it is known that many of the younger Canadians belonging to Canmore, Bankhead and Banff volunteered and were accepted for the front. The Austrians and other alien enemies at Bankhead and Canmore total a fairly large number—approaching 200—but there was not the slightest trouble with them.

ANTHRACITE.

During the fall of 1914 the chief superintendent and the chief game warden made inquiry as to the removal or destruction of the unsightly old buildings in the deserted village of Anthracite. These buildings constituted a veritable eyesore to passers by in train and by road and it was very desirable to have them removed.

Towards the end of the year the disappearance of these buildings had gradually begun, but operations were stopped by the advent of winter.

BANKHEAD.

The Bankhead townsite is administered by the Natural Resources Department of the Canadian Pacific Railway Company which has valuable coal mines in the townsite, so that the park administration has little to do with that district.

There has, however, been a considerable movement in recent years for the establishment of a local cemetery to obviate the necessity for funerals coming into Banff, a journey of some 4 miles. During the year both the resident engineer and I have looked over the available ground in comparative proximity to the town, and the feeling locally, with which I concur, leads to a site on a hill banking on the Lake Minnewanka road, and less than a mile from the town. I hope we shall be able to undertake the necessary work to open up this ground during the coming year.

The Bankhead Mines Company has established electric power for various kinds of work in its mines, in place of compressed air. From this plant it is expected there will ultimately be a surplus sufficient to moderately light the streets of the town as well as the houses of the workmen.

CANMORE IMPROVEMENTS.

Early in July work was begun on a plank sidewalk and road grading in Canmore which has greatly improved the main street in the town.

At the same time a full set of playground apparatus was erected on the recreation ground, and improvements were also made there to the extent of about \$600. The playground was much in demand during the open weather, and the children took full advantage of the slides and swings.

It had been hoped that in the supplementary estimates sanction would be given for going on with the construction of a permanent water supply for the town. There is crying need for an adequate and properly distributed water supply here, and I hope that the work will be undertaken in the near future.

There also remains to be done a good deal of road work in the town which, too, should receive the early consideration of the department.

Another desirable improvement at Canmore is the installation of an electric lighting system for the town. I found, on inquiry, that the Canmore Coal Company have installed at No. 2 mine, an electric power plant to take the place of the compressed air plant. This plant consists of an electric generator of about 300-k.w. capacity, and it is expected that there will be quite a surplus of power. The proposal to furnish electric power to the town was canvassed by the company and heartily endorsed by the people. Owing to the necessary curtailment in appropriations, however, it was impossible to do anything towards the lighting during the past year.

VISITORS TO THE PARK.

A few days before the outbreak of war His Royal Highness the Duke of Connaught, Governor General of the Dominion, Her Royal Highness, the Duchess of Connaught, Princess Patricia, and a large and distinguished party came to Banff but owing to notice which His Royal Highness received, the visit was hurriedly terminated and the party returned to Ottawa, after staying only three days. The visit was intended as a purely private one and, on that account, there was no public manifestation of welcome. During his short stay, His Royal Highness and several of his party had a good day's fishing coming from Castle to Banff, on the Bow river, in canoes.

Among the other distinguished visitors to the town during the four months of May, June, July, and August, were: Sir T. Shaughnessy and Mr. Geo. Bury, C.P.R.; Mrs. Geo. Hamar-Jackson, journalist, London, England; Ernest Thompson-Seton, Cambridge, Conn., U.S.A.; Bailie MacMillan and City Clerk Walker, Glasgow, Scotland; Rt. Rev. Bishop Pinkham; a party of six Milwaukee cap't lists; Prof. Max Eastman; Senator Lougheed and party; Mr. and Mrs. Martin Nordegg; Prof. Baumgartner, Kansas, and party of twenty-two; Dr. Walcott and wife, Philadelphia; Dean Paget; Miss Jobe, New York; D. McNicol, C.P.R.; S. H. Bowman, jr., Minneapolis; Bishop Sweeney, Toronto.

I have the honour to be, sir,

Your obedient servant,

S. J. CLARKE,

Superintendent.

BANFF HATCHERY.

This hatchery, which was erected during the summer of 1913, is situated between Green and River avenues near the Bow river falls, in the Banff National park.

The hatchery building is 54 feet 4 inches long, 31 feet wide and 10 feet high from the top of the sill to the bottom of plate. It is fitted up with 30 hatching troughs grouped in clusters of five, with passages 2 feet wide between each cluster. Each trough is 15 feet 7 inches long, 10½ inches wide, and 6½ inches deep. The residence of the officer in charge is adjacent to the hatchery, and is 32 feet long, 27 feet wide and 20 feet high.

Last season, 1913-14, 1,000,000 eyed salmon trout eggs, which were collected in lake Superior, were transferred from the Port Arthur hatchery, and the resultant hatch distributed in Minnewanka, the only lake in the district to which salmon trout is indigenous. These eggs did exceptionally well during the winter, and hatched with a loss of little over 1 per cent. The greater portion, 963,000, was distributed as fry, and the balance was retained and fed in the hatchery troughs throughout the summer; 19,000 were distributed in September, and the remainder, some 3,500, were distributed in November.

Every reasonable effort was made by the hatchery officers to collect eggs of the cut-throat trout in different streams where such fish were reported to be most plentiful. These operations were not as successful as desired, as few fish of spawning size could be found. The cut-throat trout fry that did hatch were carried through the winter in the hatchery troughs with a view to raising them for breeding stock.

As last season's operations indicated that any considerable number of cut-throat trout eggs cannot be obtained in waters from which they can be transferred to the hatchery in satisfactory condition, two large ponds were built in the summer of 1914.

The larger is 120 feet by 52 feet at water level, and has a depth of 4 feet in the deepest part. This pond will be stocked to as large an extent as possible with cut-throat trout, and it is expected that a considerable number of eggs will be obtained from fish so impounded in future seasons.

The smaller pond is 82 feet by 28 feet at water level, and is 3 feet deep. It will be used principally for rearing purposes.

Arrangements are also being made to increase the present accommodation for the raising of fry to the fingerling stage, and a number of tanks for this purpose will be installed at an early date.

The hatchery is fitted up with the latest fish-breeding appliances, and when the improvements that are now under way are completed it will be second to none.

REPORT OF CONSTRUCTION OF NEW BATH HOUSE, BANFF, ALTA.

Actual construction was commenced by the contractors for the work on this building at the beginning of April, 1914.

The necessary excavation, piling and concrete work for the foundation had already been done by the department, and the contract only included the completion of the swimming pool, superstructure, drains, supply pipes, etc. Work was carried on without interruption from the beginning of April until the beginning of December, when the contract was completed.



The new Bath House, Banff, Rocky Mountain Park.

The walls of the building are constructed of reinforced concrete, faced on the outside with blue limestone quarried in the locality, the inside face being rubbed smooth and then painted. The intention of the architect in using the local limestone for the outside facing was to have a building that would harmonize with the surroundings and scenery, and it is admitted by all who have seen it that the building is very successful in this respect.

At the northeast and southeast corners there are two belvederes, constructed of the stone and roofed with red Spanish tile, which lends an attractive touch of colour to the grey limestone walls of the building. The northeast belvedere is to be used as a shelter for the public during inclement or rainy weather, and will afford an excellent view of the swimming pool as well as of the surrounding scenery. The southeast belvedere gives access to the natural cave in Sulphur mountain. This cave

contains the small pool with the hot sulphur springs, and also fantastic rock formations in the walls and roof, and is lighted by a natural shaft extending to the surface of the ground. The tunnel between the belvedere and the cave has been paved with concrete, and electric lights installed at intervals. As this cave is always a popular resort with tourists, the increased facilities for access to it should be much appreciated.

The swimming pool is 150 feet long by 35 feet wide, and is the largest of its kind in Canada. At the shallow end the depth is 3 feet, from which it gradually deepens to 8 feet. Diving blocks, chutes and spring boards have been installed so that bathers will have every facility for enjoying themselves. A scum trough extends around the edges of the pool, the water being drawn off by pipes, thus preventing the accumulation of scum on the surface, which it would otherwise be impossible to prevent, owing to the water being so highly impregnated with sulphur. The walls and floors of the pool are lined with porcelain brick so that it can easily be kept clean and sanitary.



Interior of new Bath House, Banff, Rocky Mountain Park.

Supply pipes have been laid from the natural pool, so that an ample supply of hot sulphur water is assured. A drain pipe has also been laid from the deep end, and the pool may be rapidly emptied by means of this pipe whenever it is considered desirable for cleaning or other purposes.

Dressing rooms, capable of accommodating 132 persons, have been built along the south side of the pool. The roof over these dressing rooms and over the entrance portico form two terraces and a promenade, which are reached by stairs at the south-east corner of the building. The terraces are each 4 feet wide, and the promenade 25 feet wide. As a splendid view of the pool may be had from either of the terraces or the promenade, it is to be expected that they will prove very popular in fine weather.

Light is supplied to the dressing rooms by means of luxifer prism lights in the floor of the terraces and promenade, the light being diffused by means of an arch of diffuser sashes extending over the dressing rooms; this arch is also fitted with five hundred 25-watt Mazda lights for the supply of artificial light when necessary.

A steam heating plant capable of developing 80 horse-power is being installed, and is to be used also for operating a laundry plant to be run in connection with the bath-house. A small hot-water heater will also probably be installed in order to keep the water in the pool up to an average temperature of 90° in cold weather, when owing to the large surface of the pool there will possibly be a lowering of the temperature of the water.

APPENDIX No. 2A.

REPORT OF THE CURATOR OF BANFF MUSEUM.

BANFF, ALTA., March 31, 1915.

SIR,—I have the honour herewith to submit my tenth annual report of the Rocky Mountains Park museum for the year ending March 31, 1915.

The conditions due to the war have had very much to do with the falling-off in the number of visitors to the museum, as well as in the visitors to the park; the war also effecting material progress.

During spring I continued cataloguing the plants of the museum herbarium, and adding additional specimen sheets.

The prairie anemone, or passion flower (*pulsatilla hirsutissima*), our first spring plant to flower, commenced to flower on April 11; this was called the Buffalo flower in the early days, because of the buffalo relishing these succulent bulbed plants in the spring.

During spring, summer, and fall I was partly occupied in making collections of reptiles, salamanders, frogs, toads, leeches, and shells, and incidentally gathering insects, plants, palæontological specimens, etc.

A small collection of spiders was made, and these, with others collected previously, are being determined by Prof. J. H. Emerton, of Boston, U.S.A., with whom I had two or three outings.

The collection of bees and wasps was revised by Mr. Sladen, apiarist of the Experimental Farm, Ottawa.

Card holders for the bird pictures in use were placed in the bird cases.

Birds, mammals, reptiles, and batrachians of the museum were catalogued, including necessary information. Most of this work was done after office hours.

I revised the museum handbook for Mr. Harlan I. Smith, and sent additional matter for the second edition.

I freshly filed considerable office material, attended to correspondence both from Ottawa and elsewhere, and to visitors.

From excavations being made on Cave and River avenue, some few bones of long-buried mammals, probably elk and buffalo, were unearthed. This apparently used to be an elk country.

Several trips were made in the fall on an unsuccessful hunt for a supposedly new sulphur cave on the west side of Sulphur mountain.

A small amount of carpenter work was done in the spring to the interior of the museum, maps framed, etc.

The following additional exhibits were added during the past year:—

REPTILES.

No. 6.—Wandering garter snake (*Thamnoplus ordinoides elegans*). From Banff, Alta. Presented by J. W. Hill, Banff, Alta.

No. 14.—Flat-footed salamander (*Ambystoma macrodactylum*). From Banff, Alta.

FROGS AND TOADS.

The Western frog (*Rana pretiosa*). From Banff, Alta.

Variety of Northern frog (*Rana cantabrigiensis latiremis cope*). From Banff, Alta.

Northern toad (*Bufo boreas*). From Banff, Alta.

The snakes, salamander, frogs, and toads were determined out of a collection sent to Mr. A. G. Ruthven, of Ann Arbor, Mich.

BIRDS.

American white pelican. From Bow river, Banff, Alta. Collected by Mr. H. E. Sibbald, chief game guardian. The first pelican known to have been seen in the Rocky Mountains park. Clinging to the inside membrane of the pouch were quite a number of parasites, *menspon titan*, identified by Dr. C. Gordon Hewitt, Dominion Entomologist.

Snowy owl (*Nyctea nyctea*). From Daysland, Alta. Presented by T. J. Kay, of Banff, Alta.

Two pigmy owls (*Glaucidium gnoma gnoma*). From Banff and Georgetown, Alta. Presented respectively by Mr. B. S. Fox, Banff, Alta., and Mr. H. Brice of Georgetown, Alta.

Swainson's hawk (*Butes swainsoni*). From Spray lakes, Whiteman's pass, Rocky Mountains park. Presented by Louis Mumford, game guardian, of Banff, Alta.

Two American magpie (*Pica pica hudsonia*). From Banff, Alta. Presented by H. E. Sibbald, chief game guardian of Banff, Alta.

One white wing crossbill (*Loxia leucoptera*). From Banff, Alta. By curator.

Six gray crowned leucosticte, or rosy finch (*Leucosticte tephrocotis tephrocotis*). From Banff, Alta. From E. J. Ballard, of Banff, Alta.

One western robin, young (*Planesticus migratorius propinquus*). From Banff, Alta. By curator. (Killed flying against museum window.)

SKINS.

Northern shrike (*Lanius borealis*). From Banff, Alta. From curator.

MAMMALS.

Four muskrats (*Fiber zibethicus*, Linn.) From Banff, Alta. Purchased.

One Rocky Mountain wild cat skin. From foot of Devil's Head mountain, Alberta. Purchased.

One common shrew (*Sorex personatus*, Geof.). From top of Sulphur mountain—altitude 7,500 feet—Banff, Alta. February 9, 1915. From curator.

Several mammals are being kept for their skeletons.

INSECTS.

Amongst the moths added to the museum collection were: *Scotogramma subjugata*, *Noctua incarnea*.

A number of craneflies (*Tipulidæ*) collected in the park were determined by Dr. W. Dietz, of Hazelton, Pa.

ARCHÆOLOGY.

Twenty-one specimens from British Columbia were received from Mr. Harlan I. Smith, Archæologist, Mines Department, Geological Survey, Ottawa.

PALÆONTOLOGY.

A fine photograph of the fossil fish (*platysomus canadensis* Lambe) was received from Mr. Lawrence Lambe, F.R.C.S., Ottawa. This large fossil fish was presented to the museum by Mr. Wm. Peyto, of Banff.

Interesting specimens of petrifications of wood and leaves, etc., from near lake Minnewanka. Presented by E. J. Ballard, of Banff.

MINERALS.

Specimens of talc were presented to the museum by E. J. Ballard, of Banff—from Vermilion pass, Rocky Mountains park.

FLORA.

I found a number of plants of the salmon-berry or white flowering raspberry (*Rubus nutkanus* mocino) near Banff. Not recorded before from the Rocky Mountains park.

LITERATURE.

Pamphlets on the fish of the park, by Mr. S. C. Vick, fishery inspector, of Banff, Alta., and a Museum Handbook compiled by Mr. Harlan I. Smith, Archæologist, Geological Survey, Ottawa, were received in quantity for distribution to visitors. They fill a long-felt want, and it is hoped that other park literature will soon be available for use.

MOLLUSKS, SHELLS.

Zonitoides arboreus, Say.

Pyramidula cronkhitei, Newcomb.

Pisidium compressum, Prime.

Pisidium abditum, Hald. The hidden pea shell,

Valvata sincera, Say.

Physa hetrostrophæ, Say.

Planorbis parvus, Say.

Planorbis exacuus, Say.

Planorbis trivolvis, Say. The 3-coiled orb snail.

Lymnæa techella, Hald.

Lymnæa desidiosa, Say.

Lymnæa sumassi, Baird

Lymnæa palustris, Mull (var).

Lymnæa palustris nuttalliana, Lea.

Lymnæa stagnalis, Linn.

SOME PHENOLOGICAL NOTES.

Birds—first seen, 1915: Western robin, March 15; Mountain bluebird, March 16; Buffle-head duck, March 21; Mearn's junco, March 23; Meadow lark, March 19; Mallard duck, March 24; Ruffed grouse (drumming), March 18.

Pigmy owls, rather rare in Banff, were seen occasionally during fall and winter.

American magpies were more common than usual during fall and winter.

Richardson's grouse have increased considerably, as well as the grey ruffed grouse.

Red-breasted nuthatches were occasionally seen and heard during the winter.

Snowflakes were fewer and less often seen during the past winter—arriving November 4, 1914, and departing about the middle of March, 1915.

Plants.—On March 21, 1915, an anemone, (*pulsatilla hirsutissima*, Brit.) was found in bloom. The earliest known record. In 1889 this plant was in bloom on Tunnel mountain, April 4. The latest date recorded is April 28, 1899.

Mammals.—Mule deer were quite common during the past winter, sometimes resting close to residences.

Heather.—On July 16, 1914, I started for Simpson pass, instructions having been received to collect 3,000 more good specimens of purple heather. Mr. Hugh Sibbald acted as assistant, doing good work under trying conditions of flies and heat.

In all, some 5,000 specimens of heather were collected and dried, of which over 3,000 specimens turned out very well for the purpose required. This meant incessant work early and late, and without my assistant's faithful help could not have been accomplished before the heather was practically over.

I also staked several clumps of heather in bud in different situations in order to find how long it lasts from the bud till the petals of the flower fall. I found that under average conditions as to weather and locality a purple heather plant lasts about from a week to ten days from bud till petals fall, or is in flower not more than three to five days.

Few birds were observed; these were: Americal crossbill, western chipping sparrow, eagle, Canada jay, warbler, red-breasted nuthatch, longtailed chickadee, Richardson's owl, thrush, another species of owl, pine siskin.

Of the mammals seen, porcupines were plentiful, rubbing against the sides of the tent at night with their mournful whine; marmots, perhaps three species abundant. Fresh prints of bear about camp—black-tail.

Few insects seen: of butterflies, *argynnis astarte* was one of the very few seen.

Craneflies were rather numerous.

SPRAY LAKES.

A trip of four days to the Spray lakes, Whiteman's pass, resulted in a collection of some interesting museum material, including crustaceans, insects, water shells, batrachians, and fossils, the latter including a fine specimen of *productus* sp.

SULPHUR MOUNTAIN.

Fred Ashley, of Banff, fire and game guardian, was stationed on Sulphur mountain, living in the Meteorological Service building from August to September 3, 1914. I requested him to kindly keep the number of people and horses who reached the top of the mountain while he was there. His report is: 1914, August 4 to September 5: number of visitors, 572; number of horses, 117.

I had roughly estimated that 1,500 people climbed the trail to the top of Sulphur mountain in a year, and I do not think my estimate is far out.

This trip is much enjoyed by visitors, and a shelter should be built on top of the mountain in a suitable locality and a small shelter, say half-way down the mountain. Sudden squalls of rain or snow may come up any time, and I am sure these shelters would be very much appreciated at all times.

The past winter has been really very fine, much less snow on Sulphur mountain than usual, and after breaking a trail in November after a heavy fall of snow no more difficulty was experienced on this score, the trail being in splendid shape for snowshoeing all winter.

REQUIREMENTS.

Under present conditions I only make mention of what is more or less really necessary for the museum: Metal cabinets for the storing of much plant and insect material; extra cases for mammals and birds; more specimens.

ACKNOWLEDGMENTS.

I have to acknowledge kind assistance received from the following gentlemen for determining specimens: different members of the staff of the Experimental Farm, Ottawa, including Dr. C. Gordon Hewitt, Chief Entomologist; Mr. P. A. Taverner, Victoria Memorial Museum; Mr. Harlan I. Smith, Archæologist, Geological Survey, Ottawa; Prof. A. G. Ruthven, Ann Arbor, Mich.; Dr. W. Dietz, Hazelton, Pa., naming *Tipulidæ*; Dr. Wm. H. Dall, Curator of Mollusks, United States National Museum, Washington, D.C.; Mr. F. H. Wolley Dod, of Millarville, Alta., *noctuidæ*; and others.

The weather report is appended.

I have the honour to be, sir,

Your obedient servant,

N. B. SANSON,

Curator Rocky Mountains Park Museum.

APPENDIX No. 2B.

ANALYSIS OF NATIONALITIES OF VISITORS TO ROCKY MOUNTAINS PARK.

Bathers at the Upper Hot Springs from April 1, 1914, to March 31, 1915:—

Canada.. . . .	16,161
United States.. . . .	310
England.. . . .	108
Scotland.. . . .	31
Ireland.. . . .	13
Australia.. . . .	12
Germany.. . . .	2
Mexico.. . . .	2
South Africa.. . . .	4
Holland.. . . .	3
Italy.. . . .	4
China.. . . .	5
Total.. . . .	16,655

Bathers and visitors at Cave and Basin, April 1, 1914, to March 31, 1915:—

Number of bathers passing through turnstile.. . . .	17,904
Visitors at Cave.. . . .	9,377
	27,281

Visitors to the Cave from—

Canada.. . . .	4,677
United States.. . . .	4,502
England.. . . .	86
Scotland.. . . .	44
Ireland.. . . .	23
New Zealand.. . . .	11
Australia.. . . .	15
New South Wales.. . . .	3
Newfoundland.. . . .	4
South Africa.. . . .	6
Ceylon.. . . .	2
China.. . . .	4
Total.. . . .	9,377

N.B.—Owing to construction work, the Cave was closed for the months of June and July.

VISITORS AT RECREATION PAVILION.

The following is an analysis of the visitors registering at the recreation pavilion from May 1 to September 30, 1914:—

Canada.. . . .	1,004
England.. . . .	29
Scotland.. . . .	29
Ireland.. . . .	3
Wales.. . . .	3
Isle of Man.. . . .	2
Australia.. . . .	3
New Zealand.. . . .	3
New South Wales.. . . .	1
United States.. . . .	93
South Africa.. . . .	2
France.. . . .	4
Egypt.. . . .	1
China.. . . .	1
Denmark.. . . .	1
Germany.. . . .	2
	<hr/>
	1,281
Unregistered (estimated).. . . .	2,000
Driving parties.. . . .	3,000
	<hr/>
	6,281

PICNICS.

May 25.—Calgary Band.. . . .	800
27.—Large week-end influx.. . . .	600
30.—Private party.. . . .	50
June 3.—Many visitors without organized excursion.. . . .	2,000
27.—Knox Presbyterian Church, Calgary.. . . .	700
29.—Strathmore holiday.. . . .	500
July 18.—Church of the Redeemer, Calgary.. . . .	1,500
18.—Hudson Bay employees, Calgary.. . . .	1,200
Salvation Army, Calgary.. . . .	950
22.—High river, Nanton, and other town holiday, with boy's band	1,500
23.—Grace Presbyterian Church, Calgary.. . . .	250
29.—Calgary Brewing Company.. . . .	1,500
Aug. 7.—Calgary C. P. R. Engineers.. . . .	1,700
Methodist Sunday School, Calgary.. . . .	100
8.—Protestant Cathedral, Calgary.. . . .	100
19.—Scandinavian newspaper men.. . . .	60
Unorganized parties.. . . .	2,500
	<hr/>
Total.. . . .	15,780

Statement of Persons registered at Banff Springs Hotel, Banff, Alta., Season 1914:—

Alberta	1,584	Arkansas.. . . .	1
British Columbia.. . . .	277	Kansas.. . . .	16
Manitoba.. . . .	25	Kansas City.. . . .	38
Saskatchewan.. . . .	167	Missouri.. . . .	13
Winnipeg.. . . .	395	Nebraska.. . . .	19
Newfoundland.. . . .	2	Oklahoma.. . . .	4
	<hr/>	Omaha.. . . .	27
	2,450	Texas.. . . .	36
			<hr/>
			154
Alabama.. . . .	5	Connecticut.. . . .	40
Florida.. . . .	8	Delaware	4
Georgia.. . . .	22	Dis. Columbia.. . . .	49
Kentucky.. . . .	17	Maine.. . . .	7
Louisiana.. . . .	15	Maryland.. . . .	26
Mississippi.. . . .	1	Massachusetts	284
North Carolina	3	New Hampshire.. . . .	22
South Carolina	3	New Jersey.. . . .	89
Tennessee.. . . .	22	New York.. . . .	694
	<hr/>	Pennsylvania	228
	96		

Statement of Persons registered at Banff Springs Hotel, Banff, Alta., Season 1914—Continued.

Rhode Island..	12	North Dakota..	23
Vermont..	3	South Dakota..	5
Virginia..	8	Utah..	1
West Virginia..	7	St. Paul..	59
	<hr/> 1,473	Wisconsin..	54
			<hr/> 367
Belgium..	14	Africa..	3
Bahamas..	1	Australia..	96
Egypt..	2	Austria..	2
Philippine Islands..	4	China..	15
Italy..	1	England..	324
Ireland..	5	France..	22
India..	7	Germany..	15
Switzerland..	2	Turkey..	2
Norway..	1	Hawaii..	17
Holland..	3	New Zealand..	24
	<hr/> 40	Scotland..	39
		Japan..	1
			<hr/> 560
New Brunswick..	13	Chicago..	350
Nova Scotia..	22	Cincinnati..	54
Ontario..	552	Cleveland..	47
Prince Edward Island..	3	Detroit..	54
Quebec..	165	Illinois..	83
	<hr/> 755	Indiana..	57
		Indianapolis..	14
Arizona..	3	Iowa..	89
California..	257	Michigan..	62
Colorado..	29	Ohio..	134
Idaho..	7	Pittsburg..	63
Los Angeles..	154	St. Louis..	95
Montana..	23		<hr/> 1,102
Nevada..	2	Unlocated..	61
Oregon..	119		
San Francisco..	205	Total, 1913..	13,193
Washington State..	165	Total, 1914..	8,022
	<hr/> 964		<hr/>
		Decrease..	5,171
Milwaukee..	41		
Minnesota..	64		
Minneapolis..	120		

Statement of Persons registered at Chateau Lake Louise, Lake Louise, Alta., Season 1914:—

Alberta..	716	Arkansas..	1
British Columbia..	174	Kansas..	30
Manitoba..	34	Kansas City..	53
Saskatchewan..	104	Missouri..	35
Winnipeg..	250	Nebraska..	70
	<hr/> 1,278	Oklahoma..	11
		Omaha..	24
Alabama..	5	Texas..	50
Florida..	9	Utah..	1
Georgia..	37		<hr/> 275
Kentucky..	13	Milwaukee..	67
Louisiana..	20	Minnesota..	79
Louisville..	2	Minneapolis..	191
Mississippi..	11	North Dakota..	14
North Carolina..	3	South Dakota..	15
South Carolina..	10	St. Paul..	73
Tennessee..	23	Wisconsin..	102
	<hr/> 133		<hr/> 541

Statement of Persons registered at Chateau Lake Louise, Lake Louise, Alta., Season 1914—*Continued.*

Connecticut.. . . .	52	Indianapolis	25
Delaware.. . . .	10	Iowa.. . . .	172
Dis. Columbia.. . . .	54	Michigan	111
Maine.. . . .	12	Ohio.. . . .	156
Maryland.. . . .	42	St. Louis.. . . .	22
Massachusetts.. . . .	317		
New Hampshire.. . . .	27		1,476
New Jersey.. . . .	103		
New York.. . . .	806	Africa	3
Pennsylvania.. . . .	420	Austria.. . . .	2
Rhode Island.. . . .	20	Australia.. . . .	96
Vermont.. . . .	9	England.. . . .	328
Virginia.. . . .	9	France.. . . .	14
West Virginia.. . . .	18	Germany.. . . .	16
	1,899	Hawaii.. . . .	14
		Alaska.. . . .	4
New Brunswick	19	India.. . . .	7
Nova Scotia.. . . .	11	Ireland.. . . .	6
Ontario.. . . .	521	New Zealand.. . . .	31
Prince Edward Island.. . . .	1	Scotland.. . . .	35
Quebec.. . . .	124	Belgium.. . . .	4
	676	West Indies.. . . .	5
		Italy.. . . .	1
Arizona.. . . .	3	Japan.. . . .	6
California.. . . .	326	China.. . . .	15
Colorado.. . . .	22	Channel Islands	2
Idaho.. . . .	24	New South Wales.. . . .	19
Los Angeles.. . . .	245	Mexico.. . . .	2
Montana.. . . .	9	Switzerland.. . . .	2
Nevada.. . . .	8	Canary Islands	1
Oregon.. . . .	132	Sweden.. . . .	2
San Francisco.. . . .	271	Turkey.. . . .	3
Washington State.. . . .	270	Egypt.. . . .	2
	1,310		619
Illinois.. . . .	200	Unlocated.. . . .	73
Chicago.. . . .	523		
Cincinnati	62	Total, 1913.. . . .	12,826
Cleveland.. . . .	68	Total, 1914.. . . .	8,280
Detroit.. . . .	60		
Indiana.. . . .	77	Decrease	4,546

Number of visitors registered at Mount Royal Hotel, April 1, to September 15, (hotel closed):—

Canada.. . . .	2,515
United States.. . . .	483
England.. . . .	53
Scotland.. . . .	13
Ireland.. . . .	3
South Africa.. . . .	3
Japan.. . . .	2
New Zealand.. . . .	12
Australia.. . . .	13
Mexico.. . . .	1
China.. . . .	4
Germany.. . . .	2
Fiji Islands.. . . .	2
Ceylon.. . . .	1
Borneo.. . . .	1
India.. . . .	1
France.. . . .	2
Total.. . . .	3,106

Number of persons registered at the Grand View Villa, May 17 to December 31, 1914:—

Canada.. . . .	521
U. S. A.. . . .	38
Newfoundland.. . . .	1
	561

Number of visitors registered at King Edward Hotel, April 1, 1914 to March 31, 1915:—

Canada.. . . .	3,086
United States.. . . .	470
England.. . . .	17
Scotland.. . . .	6
Ireland.. . . .	5
Australia.. . . .	25
New South Wales.. . . .	10
New Zealand.. . . .	21
France.. . . .	1
Spain.. . . .	2
Germany.. . . .	1
China.. . . .	2
Sweden.. . . .	1
Total.. . . .	3,647

Number of visitors registered at The Homestead and Bungalow Temperance Hotel, during June, July, August and September, 1914:—

Canada.. . . .	1,095
United States.. . . .	220
England and Scotland.. . . .	20
Australia.. . . .	15
Austria.. . . .	1
Total.. . . .	1,351

SUMMARY.

Banff Springs hotel.. . . .	8,022
King Edward hotel.. . . .	3,647
Mount Royal hotel.. . . .	3,106
Grand View hotel (closed for part of year).. . . .	561
Homestead and Bungalow.. . . .	1,351
Hot Springs hotel—estimated—.. . . .	2,150
Lake Louise Chalet.. . . .	8,280
Picnics, estimated.. . . .	15,780
Summer cottagers, estimated.. . . .	5,000
Total.. . . .	47,897

APPENDIX No. 2C.

REPORT OF THE ALPINE CLUB OF CANADA.

BANFF, ALTA., April 1, 1915.

The Alpine Clubhouse, perched on its eyrie high above the town, was again open all the season, and in spite of the paucity of travel as compared with former years, attracted a large number of visitors.

Again the club-house was visited by many strangers who came to enjoy the magnificent view and to obtain detailed and accurate information about the mountain region. The house is set upon a hill where it cannot be hid, and acts as a focus for many eyes, arousing interest and inquiry.

An ascent was made of mount Edith, and club expeditions were made to the Ptarmigan lake country and to the neighbourhood of mount Assiniboine. Much regret was expressed that access was not made easier to this magnificent district by the establishment of good trails and of rest houses where travellers could find accommodation at reasonable rates for a night or more, thus attracting a class of pedestrian tourist which has made Switzerland what it is in the world of travel to-day.

Members of the Club-house were drawn from the following places:—

CANADA—

British Columbia—Revelstoke, Sydney, Vancouver, Victoria.

Alberta—Calgary, Edmonton, Edson, High River, Lethbridge, Macleod, Olds, Vulcan.

Saskatchewan—Prince Albert.

Manitoba—Brandon, Cartwright, Winnipeg.

Ontario—Elgin, Galt, Ottawa, Strathroy, Toronto.

Quebec—Montreal.

Nova Scotia—Windsor.

UNITED STATES—

District of Columbia—Washington.

Illinois—Chicago, Galesburg, Rockford.

Indiana—Lafayette.

Massachusetts—Boston.

New York—Brooklyn, New York.

ENGLAND—Eton, London.

NEW ZEALAND—Auckland.

SWITZERLAND—Grindenwald.

AUSTRIA—Vienna.

APPENDIX No. 2D.

REPORT OF TIMBER AND GRAZING INSPECTOR.

BANFF, ALTA., April 9, 1915.

SIR,—I have the honour of submitting to you my first annual report as Timber and Grazing Inspector of the different parks.

My appointment as inspector did not take effect until near the first of July, consequently the time at my disposal was too short to allow me to visit all the parks.

During the month of July I visited the Spray Lakes district, on my way there passing the Eau Claire Company's timber berth and over Whiteman's pass. There is a nice body of timber (merchantable) along this trail as far as the game warden's cabin at Whiteman's pass. From here as far west as Bryant creek I found that there had been a splendid growth of spruce and pine, but the fire had swept through the valley, practically destroying all the green timber in the district, although during the intervening years a magnificent growth of young pines had replaced those killed by the fire. The young trees have attained a height of from 15 to 30 feet, and they stand so thick on the ground that they are almost impenetrable.

Several different companies have been operating in this district for a number of years; last year one of them took nearly 40,000 logs down the Spray and Bow rivers as far as Canmore, and at the present time the Canmore Coal Company have skidded on the banks of the Spray river between 35,000 and 40,000 logs preparatory to driving them down the coming season.



Outlet of unnamed lake lying east of Mt. Ball,
Rocky Mountains Park.



Photo by W. J. Topley.
Mount Rotson and Berg Lake. (Close to Jasper Park.)

I also inspected the timber on both sides of the Bow river as far west as Castle mountain, and from there I went west over the Vermilion pass.

On the south side of the Bow river, with the exception of a few miles, I found that the fire had destroyed the merchantable timber, but reproduction had taken place and in most places there was a nice stand of timber covering the ground, and the same is true of the north side.

From Castle mountain west over the Vermilion pass a recent fire had destroyed some timber on both sides of the automobile road but there is still left a nice body of merchantable timber, making the automobile road over the Vermilion pass one of the most beautiful scenic roads to be found any place and, when the road is completed through to British Columbia, for beauty it will be second to none in North America.

I also visited the valleys of the Cascade, Stoney creek, Cut Head, and the Panther.

With the exception of three or four small bodies of green timber, all the merchantable timber in these valleys had been burnt a number of years ago, but reproduction was taking place, with the exception of about 8 miles in the Cascade valley, and, for some unaccountable reason there is not more than 1 per cent reproduction here.

Along the Cascade there is a large body of dry timber, but the many obstacles encountered in driving this stream have prevented any one from taking this timber out. There is more or less of this dry wood scattered all through the different parks, and on account of its accessibility it is much sought after for fuel, lumber, and mine props.

The following cabins were built during the past season, and inspected by me: one cabin at Whiteman's pass, 12 miles from Banff; one on Healy creek, 8 miles southwest of Banff on the trail leading over the Simpson pass; one on the Ghost river, 18 to 20 miles northeast of Banff; one on Cut Head creek, about 25 miles north of Banff. The department took over and rebuilt a two-room cabin in the Vermilion pass. There was also built, this past season, at the junction of the Panther and Red Deer rivers a nice, cosy, four-roomed cottage and stable for housing the saddle horses used during the winter months, this being the headquarters of the game warden who looks after the horses that range here during the winter season.

All the cabins within the bounds of the Rocky Mountains park, with the exception of one or two, are supplied with stoves, bunks, and fire-fighting tools.

Although the past season was an exceptionally dry one, we had only one fire in the parks that caused any great amount of damage, and that was in Yoho park, where several thousand acres of land were burnt. The loss in merchantable timber, however, was infinitesimal.

During the fiscal year just ended, nearly 160 dry-wood permits were issued, and large quantities of logs, cordwood, and mining props have been removed from the different parks during the season, all adding materially to the revenue of the parks. I might also state that quite a number of grazing permits were issued during the year. The number of horses and cattle grazing within the different parks is rapidly increasing each year, and the fees derived from this source should materially assist, as the years go by, in increasing the revenues of the parks.

In closing I wish to say that all residents and non-residents seem to live up to and respect the timber and grazing regulations.

I am, respectfully yours,

J. F. MORRISON,

Timber and Grazing Inspector.

APPENDIX No. 3.

REPORT OF THE SUPERINTENDENT OF YOHO AND GLACIER PARKS.

FIELD, B.C., March 31, 1915.

SIR,—I have the honour to submit herewith my first annual report as superintendent of Yoho and Glacier parks, for the fiscal year ending March 31, 1915. As I did not receive this appointment until September, the season's development work in these two parks was practically over before I took charge; I shall therefore in this report have to draw largely from the information contained on the various files in this office, together with what knowledge I have been able to gather from observation in my different trips through the parks since my arrival.

YOHO PARK.

Work was commenced in this park at the beginning of May. Just as soon as the ground was dry enough the streets in the village of Field were thoroughly cleaned of all refuse, which was hauled to the nuisance ground; the streets were raked over, and those sidewalks which needed repairing were attended to. One hundred balm of Gilead trees were planted on the different streets, replacing those which had died since last year, and also extending the rows on three streets which were then gravelled where they required it.

Attention was then given to the Emerald Lake road. Ditches for draining purposes were cleaned out and in places gravel was spread. All culverts were also put in a thorough state of repair. Two sectionmen's cabins were built on this road, one near the 2-mile post and the other near the 4-mile. This road, which leads to the famous Emerald lake, where the Canadian Pacific Railway Company have their well-known Chalet, is now in perfect condition and is one of the most beautiful and enjoyable drives to be found anywhere in the mountains. This route was also largely used by tourists when on their way to Summit Camp, which was run by the same company, with their popular manager, Captain Loyd, in charge. At this camp the traveller could enjoy all the delights of real camp life, without having those few discomforts which most campers have to contend with and from here he could make a number of beautiful and interesting trips.

On the Emerald Lake road it was also necessary this spring to do a considerable amount of cribbing in order to change the course of the Kicking Horse river, which was making inroads into the bank and cutting out the road. Opposite the Canadian Pacific Railway Company's depot, a footbridge was built across the river to the athletic grounds; this bridge is 200 feet long, supported by three cribs filled with rock, and has a hand-rail on either side. The Yoho road next received attention. On this road a considerable amount of work was done. It was found necessary to replace the stringers in the bridge over the Kicking Horse river at mile 4 and also the planking. Between miles $4\frac{1}{2}$ and 5, a survey was made with the object of reducing the grade, which was very heavy at that point. This work was done during the month of June, so that we now have a grade of from 5 to 10 per cent where formerly the grade was about 18 per cent. This work was on a very steep side hill and necessitated a great deal of cribbing to hold the material moved to make the road-bed. On this hill the distance was also reduced some 300 feet. Beyond this hill and up to the 5-mile board, the road through the woods was widened to 16 feet, and was all re-gravelled. Two sectionmen's cabins were also built on this road. These cabins should prove of great

use to us, as we shall be enabled to keep two or three men on each road during the summer months, who will be able, except when special work is undertaken, to keep these roads in a thorough state of repair. During the month of July, a force of men started to work widening the Yoho canyon. This being all rock work, is of necessity very slow, but it was hoped to have been able to complete the work this summer, and had it not been for the Wapta fire I think this could have been done; but on account of the size of this fire it became necessary to take the whole gang of men from the Yoho road in order that they might assist in getting it under control. Then, when the fire was finally extinguished, our appropriation was so nearly exhausted that it was necessary to close down all road work for the season. However, I trust that with your approval



The Kickinghorse river near Wapta, Yoho Park.

next season we shall be able to complete this road, which is a great favourite with the tourist, and which for scenic beauty cannot be surpassed anywhere in the mountains.

TRAILS.

During the season considerable work was done on trails. In May, a small force of six men was sent out to make a diversion on the way to Leancoil. It was found necessary to leave the river bank and build 1 mile of new trail, as the old one was very badly washed out in places, and was impassable on account of mud holes. The trail to the fossil beds was also cleaned out during this month.

The trail from Ottertail bridge south towards lake McArthur for a distance of 8 miles was cleared, and from Takakkaw falls to Twin falls and the branch to the Yoho glacier. In doing the latter trail nearly a mile of new trail near lake Duchesney had to be re-located and also on the branch to the Yoho glacier. Lake Duchesney had risen so high that horses had to swim to get along the old trail. Burgess pass trail was also cut out, culverts repaired and all put in good shape. Later in the season about $4\frac{1}{2}$ miles of new trail were cut up the Ottertail river, to where McArthur creek

flows into it, and from thence up McArthur creek for a distance of about $1\frac{3}{4}$ miles. This trail opens up a very large country, and in the event of a fire in that part of the park would be invaluable.

About 3 miles of trail on high land not far from the Little Yoho river were located, cleaned out, and about half a mile of side-hill work done. After the trail was constructed it was used by the Alpine Club, and was pronounced by the members to be a great improvement upon the one by which they went into camp. The next trail is high and dry, and the scenery from it is fine.

At the big bridge where the Ottertail road crosses the river we erected a fire warden's cabin. From this point the country can be seen for miles around, and a warden stationed at this spot would have no trouble in locating any fire situated in his district. It is most essential that our fire patrols, both in the Yoho and Glacier parks, should be both thorough and efficient. We have to be constantly on the alert to



Emerald Lake, Yoho Park.

guard against the carelessness of campers and tramps passing through the parks, who in spite of all warnings will leave their camp fires without first seeing that they are properly extinguished, or throw their matches and cigar ends into the bush, and it is only by keeping a careful watch and promptly suppressing these fires before they are able to gain headway that we are able to preserve our timber, which is one of our greatest assets, not only for its market value, but more particularly for its scenic qualities.

During the summer the Alpine Club of Canada held its ninth annual camp in the Upper Yoho valley. Over 200 attended from all parts, and I understand that they all thoroughly enjoyed the outing and were pleased with the beauties of the park. I am inclosing a short account of their camp which the secretary, Mr. S. H. Mitchell, was kind enough to send me. I also inclose a statement of the guests registered at the Mount Stephen hotel at Field and the Summit Camp, Yoho. These figures show quite a large decrease in the number of visitors, but with the exceptional conditions

which prevailed during the last half of the year, it was only to be expected. There is no doubt in my mind, however, that the public realize more each year the wisdom of reserving these parks, and appreciate the advantages to be derived from them.

GLACIER PARK.

As usually happens on account of the great depth of the snowfall in this park, it was not possible to start work until the beginning of June. Then Foreman Patterson went to Glacier to open up the work there, with instructions to clear the side ditches and attend to the necessary gravelling and repairs on the first 4 miles of the road to the Caves. This work was completed in June, as well as the clearing and repairing of the trails from Glacier House to the Great glacier, and also from the Glacier House to the Asulkan glacier, and to the Glacier crest. The trail from Rogers pass to Glacier was also attended to.



Game Warden's Cabin, Glacier Park

In July a gang of men started to continue the construction of the road to the Nakimu caves, still under the foremanship of Mr. Patterson. Good progress was made until the end of August, when on account of the heavy expenditure which the Wapta fire had entailed, work had to be discontinued. This road has now reached a point a little over a mile from the Caves, and from there on there is a good trail. I had the pleasure of making a trip from Glacier House up to the Caves in October last. Leaving the hotel at 9 a.m., I walked up in a little over two hours, taking plenty of time on the way, and although I have been twenty years in the mountains, I was never more impressed with the grandeur of mountain scenery than I was on this occasion. Every mile of the road gave an entirely different view, until I emerged on the beautiful little flat where Mr. Deutschman, the government caretaker of the Caves resides. Mr. Deutschman has made some very great improvements to his house this summer. The addition of a good-sized sitting room with a large open fireplace, will well repay the

time and labour that he has spent on it, and will be greatly appreciated by his many guests. During the last season he had 197 people sign their names on his register, and many others visited the Caves who omitted to sign. I trust that during the coming year we may be able to finish this road to the Caves, and so make this wonderful trip possible for those who are not able to walk so long a distance, or who do not feel equal to a ride on horseback.

In this park the Canadian Pacific Railway Company are driving a double-track tunnel through mount MacDonald. This tunnel will be 5 miles in length when completed, and will be the longest in North America. It will eliminate the loops on the western side and also about 5 miles of snowsheds, and will reduce the distance by some 4 miles, besides cutting down the grade enormously. This work is due to be completed in December, 1916, and if the contractors, Messrs. Foley Bros., Welch and Stewart are able to maintain their present rate of progress, they will be finished well within their time-limit.

In conclusion, I wish to thank all officials, of both the Yoho and Glacier parks, for the generous support they have given me in the discharge of my duties since my appointment, and also all those other officials with whom I have had the pleasure of coming in contact, including yourself, sir, all of whom I have found ready and willing to render me whatever assistance lay within their power.

I am, sir,

Your obedient servant,

E. N. RUSSELL,

Superintendent, Yoho and Glacier Parks.

ANNUAL CAMP OF THE ALPINE CLUB OF CANADA.

The Alpine Club of Canada held its ninth annual camp in the meadow at the head of the Upper Yoho valley from July 21 to August 11, 1914. The prolongation of the period to three weeks was found to afford general satisfaction and was pronounced a success. In all, 206 were placed under canvas, the largest number yet recorded. Mr. W. W. Foster, M.P.P., attended as the official representative of the British Columbia Government, and expressed his great satisfaction at the wonderfully successful work the club was doing in making public the attractions of the mountain regions, both for the province and also for the Dominion of Canada. Mr. P. C. Barnard-Hervey, the general superintendent of Dominion parks, in the examination of the magnificent new trail being built in the Upper Yoho made several visits to the camp, seeing it in all its moods, and also spoke appreciatively of the work being done for Canada.

Dr. Emerton, of Boston, the distinguished student of spiders, was probably the most widely known of the men of science present. Dr. C. Barck came from St. Louis to continue his study of North American glaciers and snowfields. The Hon. Mr. Justice Galt, of Winnipeg, represented the law; Dr. W. E. Stone, President of Purdue University, Indiana, the Very Rev. Dr. Robinson, of St. Johns College, Winnipeg, formerly Dean of Belfast, Ireland, and Miss E. L. Jones, of Havergal College, Winnipeg, the tutorial profession. In fact there were members of all professions present. Mr. C. J. Collins, the English artist, made many sketches, and will hold an exhibition of his finished pictures of the mountains in England when peace again prevails.

There were present, members of the English, Swiss, and American Alpine Clubs, the Appalachian Mountain Club of Boston, "The Mountaineers" of Seattle, and the "Mazamas" of Portland, Oregon.

A subsidiary camp was placed near the Yoho glacier, which was very popular. The following peaks were climbed, several of them by varied routes: President, Vice-President, Marpole, Kerr, Kiwetinok, Pollinger, McArthur, Isolated, Habel, Gordon, and Balfour.

Extended trips were made not only through Emerald pass and the whole of the Yoho valley, but into the Kiwetinok valley and over the Daly glacier, to Sherbrooke lake. Ninety-two passed the test for active membership upon the various peaks.

A synopsis of places represented by members is given below, arranged by provinces, states, and countries:—

CANADA—

British Columbia.—Ferne, Kelowna, Revelstoke, Seymour Arm, Vancouver, Vernon, Victoria, Wilmer.

Alberta.—Banff, Bow Island, Calgary, Coutts, Cowley, Edmonton, Lundbreck, Medicine Hat, Macleod, Namaka, Strathcona, Vulcan.

Saskatchewan.—Moosejaw, Prince Albert, Regina.

Manitoba.—Brandon, Kemnay, Winnipeg.

Ontario.—Hamilton, London, Ottawa, Strathroy, Toronto.

Quebec.—Montreal.

Nova Scotia.—New Glasgow.

UNITED STATES—

Connecticut.—Greenwich.

Illinois.—Chicago, Galesburgh.

Indiana.—Lafayette.

Massachusetts.—Boston.

Missouri.—St. Louis.

New York.—New York.

North Dakota.—Grand Forks.

ENGLAND—

Ascot, Eton, Hitchen, London.

SCOTLAND—

Ayr.

SWITZERLAND—

Grindenwald, Interlaken, Lucerne.

AUSTRIA—

Vienna.

Statement of persons registered at the Mount Stephen hotel, Field, B.C., season 1914:—

Alberta.. . . .	601	Alabama.. . . .	1
British Columbia.. . . .	524	Florida.. . . .	2
Manitoba.. . . .	6	Georgia.. . . .	7
Saskatchewan.. . . .	50	Kentucky.. . . .	2
Winnipeg.. . . .	46	Louisiana.. . . .	3
		Mississippi.. . . .	5
		North Carolina.. . . .	2
		Tennessee.. . . .	5
	1,227		
New Brunswick.. . . .	1		27
Nova Scotia.. . . .	5		
Ontario.. . . .	156	Arizona.. . . .	3
Quebec.. . . .	38	California.. . . .	113
Prince Edward Island.. . . .	1	Colorado.. . . .	5
	201	Idaho.. . . .	2
		Los Angeles.. . . .	2

Statement of persons registered at the Mount Stephen hotel, Field, B.C., season 1914—Continued.

Montana.. . . .	2	Chicago.. . . .	93
Nevada.. . . .	4	Cincinnati.. . . .	8
Oregon.. . . .	38	Cleveland	10
San Francisco.. . . .	58	Detroit.. . . .	13
Washington State.. . . .	45	Illinois.. . . .	64
	<hr/>	Indiana	8
	272	Indianapolis	2
	<hr/>	Iowa.. . . .	22
Arkansas	1	Michigan.. . . .	30
Kansas.. . . .	7	Ohio.. . . .	45
Kansas City.. . . .	2	Pittsburgh.. . . .	56
Missouri.. . . .	5	St. Louis.. . . .	32
Nebraska	9		<hr/>
Oklahoma.. . . .	3		343
Texas.. . . .	6		<hr/>
Mexico.. . . .	3	Africa	5
	<hr/>	Australia	38
	36	Austria.. . . .	3
	<hr/>	China.. . . .	5
Connecticut.. . . .	13	England	102
Delaware	2	France.. . . .	4
District of Columbia.. . . .	22	Germany.. . . .	6
Maine.. . . .	2	Turkey.. . . .	1
Maryland.. . . .	6		<hr/>
Massachusetts.. . . .	79		164
New Hampshire.. . . .	7		<hr/>
New Jersey.. . . .	27	Hawaii.. . . .	2
New York State	192	India.. . . .	3
Pennsylvania.. . . .	131	New Zealand	15
Rhode Island	5	Scotland.. . . .	11
West Virginia.. . . .	6	Wales	4
	<hr/>	Belgium.. . . .	3
	492	Yukon.. . . .	1
	<hr/>		<hr/>
Milwaukee.. . . .	30		39
Minnesota.. . . .	32		<hr/>
Minneapolis.. . . .	29	Unlocated.. . . .	75
North Dakota.. . . .	12		<hr/>
St. Paul.. . . .	15	Total, 1913.. . . .	4,716
Wisconsin.. . . .	16	Total, 1914.. . . .	3,010
	<hr/>		<hr/>
	134	Decrease	1,706
	<hr/>		<hr/>

Statement of persons registered at Summit Camp, Yoho, season 1914:—

California.. . . .	60	Ontario.. . . .	64
Cincinnati.. . . .	2	Manitoba.. . . .	43
Colorado.. . . .	7	Nova Scotia.. . . .	4
Connecticut.. . . .	2	Alberta.. . . .	97
Florida.. . . .	2	Saskatchewan.. . . .	25
Idaho.. . . .	5	Quebec.. . . .	2
Illinois.. . . .	61	British Columbia.. . . .	44
Indiana	2		<hr/>
Kansas.. . . .	2		279
Massachusetts.. . . .	38		<hr/>
Maryland	1	England.. . . .	24
Minneapolis	21	Scotland.. . . .	6
Minnesota.. . . .	23	Wales.. . . .	2
Michigan	8		<hr/>
Montana.. . . .	5		32
Nebraska.. . . .	2		<hr/>
Nevada.. . . .	2	Africa	1
New York	86	Australia.. . . .	4
New Jersey.. . . .	4	Austria.. . . .	2
North Dakota.. . . .	2	France.. . . .	1
Ohio.. . . .	19	Germany.. . . .	4
Oregon.. . . .	4	China.. . . .	1
Pennsylvania.. . . .	8	Turkey.. . . .	1
Texas.. . . .	4	West Indies.. . . .	1
Washington.. . . .	8		<hr/>
Wisconsin.. . . .	8		15
	<hr/>		<hr/>
	396	Not known.. . . .	32
	<hr/>		<hr/>
		Total.. . . .	754

Statement of persons registered at Glacier House, Glacier, B.C., season 1914:—

Alberta.. . . .	173	Pittsburg.. . . .	63
British Columbia.. . . .	610	St. Louis.. . . .	52
Manitoba	15		
Saskatchewan.. . . .	35		
Winnipeg.. . . .	125		
	<hr/>		<hr/>
	958	Milwaukee.. . . .	42
	<hr/>	Minneapolis.. . . .	66
Nova Scotia.. . . .	4	Minnesota.. . . .	29
Ontario.. . . .	138	North Dakota.. . . .	5
Quebec.. . . .	48	St. Paul.. . . .	28
	<hr/>	Wisconsin.. . . .	25
	190		<hr/>
	<hr/>		195
Alabama.. . . .	1	Connecticut.. . . .	34
Florida.. . . .	5	Delaware.. . . .	3
Georgia.. . . .	17	District of Columbia.. . . .	21
Kentucky.. . . .	5	Maine.. . . .	3
Louisiana.. . . .	8	Maryland.. . . .	17
Louisville.. . . .	4	Massachusetts.. . . .	174
Mississippi.. . . .	5	New Hampshire.. . . .	11
North Carolina.. . . .	4	New Jersey.. . . .	53
South Carolina	2	New York.. . . .	377
Tennessee.. . . .	13	Pennsylvania.. . . .	130
	<hr/>	Rhode Island.. . . .	9
	64	Vermont.. . . .	4
	<hr/>	Virginia.. . . .	8
Arizona.. . . .	3	West Virginia.. . . .	2
California.. . . .	168		<hr/>
Colorado.. . . .	24		846
Idaho.. . . .	2		<hr/>
Los Angeles.. . . .	104	Africa	7
Nevada.. . . .	6	Australia	28
Oregon.. . . .	58	Austria.. . . .	2
San Francisco.. . . .	90	China.. . . .	12
Washington State.. . . .	77	England.. . . .	158
	<hr/>	France.. . . .	8
	532	Germany.. . . .	9
	<hr/>	Turkey.. . . .	2
Arkansas	1	Hawaii	7
Kansas.... .	9	India.. . . .	2
Kansas City.. . . .	23	Ireland.. . . .	3
Missouri.. . . .	3	New Zealand.. . . .	34
Nebraska.. . . .	20	Scotland.. . . .	14
Oklahoma.. . . .	2	Switzerland.. . . .	1
Omaha.. . . .	1	Wales	1
Texas.. . . .	18	Japan.. . . .	7
	<hr/>	Strait Settlements	4
	77	New South Wales	14
	<hr/>	Philippine Islands.. . . .	1
Chicago.. . . .	299	Sweden.. . . .	3
Cincinnati.. . . .	43	Java.. . . .	2
Cleveland.. . . .	29		<hr/>
Detroit.. . . .	34		319
Illinois.. . . .	65		<hr/>
Indiana.. . . .	33	Unlocated.. . . .	34
Indianapolis.. . . .	11		<hr/>
Iowa.. . . .	53	Total, 1913.. . . .	5,057
Michigan.. . . .	39	Total, 1914.. . . .	4009
Ohio.. . . .	73		<hr/>
		Decrease.. . . .	1,048

APPENDIX No. 4.

REPORT OF THE SUPERINTENDENT OF BUFFALO PARK.

WAINWRIGHT, ALTA., March 31, 1915.

SIR,—I have the honour to submit herewith my third annual report as Superintendent of Buffalo park, for the fiscal year ending March 31, 1915.

The weather at the beginning of our present fiscal year was very stormy and cold, so that we had a late start with our farm operations, it being the middle of April before we were able to get on the land with our seed drills. However, when the weather did break up it turned very fine, and we were successful in getting all our grain in by the end of the month. Three hundred acres were put under crop,



A Buffalo division advancing at Double Quick, Buffalo Park, Wainwright.

the seed-bed having been prepared during the fall of the previous year. After the seeding operations were completed, we put all our outfits on breaking up more new land, as it was necessary to have more land under cultivation on account of the very light nature of our soil, and after the second crop on this light land it will be necessary to summer-fallow every other year in order to ensure a good crop each year. During the summer we turned over another 300 acres of new land which gives us now 600 acres of land under cultivation at winter quarters. Three hundred acres will be ample for us to crop each year for green feed and feed oats; from it we shall be able to furnish sufficient feed oats for all the parks in Alberta, as well as Buffalo park, and the remaining 300 acres can be summer-fallowed, which will make sure of a good crop the following year.

We commenced cutting our grain the first day of August, working two binders, which were kept going to their full capacity for two weeks, Sundays included, in order to get the grain cut before it shelled out. We cut 90 acres of this land for

green feed in oat sheaves, and the balance was cut for feed oats. The returns were very satisfactory for light land. From 210 acres we threshed out 14,384 bushels of feed oats, all being placed in portable granaries by the machine. Three thousand five hundred and two bushels of this grain have already been shipped to Rocky Mountains park, Banff, and 535 bushels to Elk Island park, Lamont, and we hope to ship 1,000 bushels to Jasper park in the spring.

When the threshing was completed we immediately set to work and ploughed up 200 acres of stubble land. This land has only been cropped once, and will be in good shape for another crop in the spring. The remaining 100 acres of stubble which have been cropped twice will be summer-fallowed next summer. We have now 500 acres of land prepared in splendid shape for the seed drills in the spring, besides 32 acres of land at the Wainwright end, which was summer-fallowed last summer. This 32 acres will be used for green feed in sheaves only. In view of the present conditions we thought it best to have all the land available prepared for seed in the spring. I presume there will be no trouble in disposing of all the oats that we can raise next year. We should have in the neighbourhood of from 22,000 to 23,000 bushels over and above our requirements.

Our farming operations were completed on the last day of October, after a most successful year.

On July 12, our outfits pulled up to Wainwright and put up 75 tons of hay at Wainwright, as well as 25 tons at Rocky Ford. The cost of putting up hay at the Wainwright end is a little greater on account of the long hauls, which cannot be avoided. On July 27, our haying operations were completed at Wainwright and Rocky Ford and the outfits were then put back on the meadow at winter quarters, where 500 tons of first-class hay were put up, completing the haying operations on the meadow on August 26. We were very fortunate this year in having all our haying and threshing operations completed before the rainy weather set in. Three days after our threshing was completed, the last day of August, the rainy season set in, but instead of its being a detriment to us it was a real benefit as it placed the land in excellent condition for the fall ploughing.

On the first of November we commenced hauling hay from the meadow to the hay corral adjacent to the feed grounds, and commenced feeding at winter quarters on November 15, the earliest on record. My object in feeding so early was to keep the stock in good condition for the rough weather. During the month of September, when the stock usually looks its best, we found they were not up to the mark, especially the young stock. This was no doubt due to so much rain in September, when the prairie grass usually cures, but this year it did not get a chance to cure properly before it was hit by the frost. However, in October, the young stock seemed to improve wonderfully, and after being on the feed ground for a while they were in splendid condition, and I am pleased to say at the time of writing that I never saw the stock look better for this season of the year. I attribute this largely to the green feed and the good oat straw that they are getting regularly with their hay.

During the summer I had all the buildings painted, which puts them in first-class shape for a few years.

I am pleased to report that the shrubs and trees around the superintendent's quarters have done very well, and have now reached the stage when pruning will have to be started to obtain the best results. I intend placing a man at this work the very first thing in the spring.

During the month of August I had a small office built on the south side of the superintendent's residence. This accommodation has been greatly appreciated, indeed, as well as being a great help in furthering the work.

During the month we also constructed a number of cement fence posts of different designs, as an experiment. Owing, however, to having so many other operations on hand at the time and during the entire fall, we were unable to get any erected, but this will be done the first thing in the spring. I am informed by local contractors that

these posts can be made for three dollars a post, or less. If so, I am sure they would be the cheapest investment in the long run, as our wooden posts do not appear to last any length of time.

We also received a number of steel lines and corner fence posts for experimenting with. These posts look well, but I do not think they would prove a success here on account of the stony nature of our fence line. I was given to understand that a representative of the fence company was coming out to see that the posts got a fair trial, but he did not come and we waited so long for him that it became too late to erect them in the fall on account of the frost.

Our fencing operations this year comprised only the fencing of the farm with posts two rods apart and 7-foot wire, and the fencing of a horse pasture at winter quarters. As a portion of the farm had been fenced with low wire which was of no service in that capacity, we removed it and made use of it for the fence at the horse pasture. We had not sufficient posts on hand to fence the farm this year, and we were obliged to use all the available posts we had, but by taking every other post out of the main fence between the farm and the meadow, we were able to string the wire with the posts two rods apart. We had great difficulty in keeping the buffalo out of the paddock at winter quarters, as it is also fenced with low wire, and as our crop was too valuable to take any chances with, we did the best we could with what we had. The gaps in the farm fence and the main fence at the meadow will be filled in the spring, as we have now sufficient posts on hand to complete this work.

I intend, with your approval, to commence erecting immediately a high wire fence dividing the paddock at winter quarters from the main park, as soon as the frost is out of the ground in the spring. This is absolutely necessary, as this paddock must have a chance to grow up untouched during the summer months.

I hope next year that we shall be able to cross fence the park so as to divide our herd and breed up. This herd, or a portion of it, has been running together now for almost five years, and there is no doubt that a great deal of interbreeding is going on which should be cut out as much as possible. I should also like to see the corrals erected as proposed this year if at all possible.

The new telephone line, a double-wire system with 24-foot poles, was constructed last fall from the superintendent's residence to winter quarters and thence to Hardisty gate, and has been of very great service and is very valuable from the fire protection point of view. The line works perfectly and is a great source of comfort to all in the park.

The fireguarding was let by contract again this year, and the guards placed in fairly good shape. A couple of sweeps of the discs would have made a splendid job of it, but we were obliged to discontinue this operation, owing to the present crisis. I feel, however, that we are in fairly good shape now, with the telephone line installed. The usefulness of the guard was proved last spring when a prairie fire occurred on the south side of the park. The fire ran between the guards for a distance of 5 miles, doing no damage at all to the fence line. Next year all the fireguarding will be done by our own teams, as we shall have no more land to break on the farm.

I am pleased to be able to report that all our horses have come through the season's work in splendid shape, as well as the horses wintered here from Jasper park. All are in fine condition. We have bred all the mares this year, and I look for a good bunch of young stuff next year. We only had four colts this year, which was due to a horse used the year previous proving to be no good.

WILD ANIMALS.

The buffalo have kept up their good record by giving us an increase of 202 this year. The loss for the year was small. Three bulls and one cow died, and two bulls were so badly crippled that there seemed no hope of their pulling through the winter, so I had them killed. I regret to have to report a great number of cripples this year among the cows, which is due to the rutting after the ground was frozen and slippery.

We will make another effort in the spring to get another count on the buffalo according to sex.

I am pleased to report that the elk have done exceptionally well, giving a natural increase of 10. They are in excellent condition.

The moose show an increase of three and a decrease of one cow, which was killed by a bull moose. The cow was a decided loss to the park, as she always gave an increase of twins each year. The browsing for the moose in the home paddock at Wainwright, where they have always been confined, is becoming thin, and we were obliged during the spring and summer to turn out nine head, leaving a couple of young bulls and four old bulls for tourist attractions. Those turned out into the big park have done splendidly which, of course, is only natural considering the immense amount of browsing to be had.



Elk in Buffalo Park.

Photo by Wainwright Studio.

We have only three antelope left, one having been killed and devoured by coyotes during the summer. All that we now have are males. I have been experimenting with the two male antelope at the Wainwright end and find that by leaving them in the open at all times they do far better than by giving them protection in the shed, as was previously done. We have kept them in the open now for two winters, and they are certainly doing well and look a hundred per cent better than when given protection. I believe we could make a success of raising the antelope now if we had another chance.

The mule deer in the main park are doing exceptionally well; although we have been unable to secure their exact numbers, the increase, I am sure, is good. Upon one occasion this fall our rider counted forty-seven at one time.

The animals in Buffalo park are as follows:—

Animals.	Total last fiscal year.	Increase.	Decrease.	On hand.
Buffalo.....	1,444	202	6	1,640
Elk.....	32	10		42
Moose.....	13	3	1	15
Antelope.....	4	....	1	3
Mule Deer.....	70 ¹	30		100
Total animals in park.....				1,710

¹Estimated.

I am pleased to report that the feathered game are becoming more at home each year within the park limits, where they apparently realize they are protected. We had one infraction of the park regulations this year, the first infraction of the regulations on record. The offence, however, was not very serious. The party had shot a bird outside the park limits and went inside to get it when it again flew and he shot at it inside the park limits. He was immediately caught by the game wardens and arraigned for trial. I do not think that there will be any further attempts of this nature in the future.

Our total number of visitors to the park this year from April until November, when it was closed to visitors on account of the foot-and-mouth disease in the United States, was 2,710, all a purely Canadian tourist traffic.

Upon bringing my report to a close I wish to make special mention of my assistant, Mr. W. H. Douglas, who had full charge of all the operations at winter quarters, which proved to be such a success. The services of Caretaker Terpening in handling the stock are also worthy of mention. These two men take a deep interest in their work, and can always show results, and the success of all operations I attribute greatly to them.

In conclusion, I wish to heartily thank yourself and the commissioner for your valuable assistance in making this a most prosperous year for the Buffalo park.

I am, sir, your obedient servant,
W. E. D. McTAGGART,
Superintendent.

APPENDIX No. 5.

REPORT OF THE SUPERINTENDENT OF ELK ISLAND PARK.

ELK ISLAND PARK, LAMONT, March 31, 1915.

SIR,—I have the honour to submit herewith my fifth annual report as superintendent of Elk Island park for the fiscal year ending March 31, 1915.

I should like to be able to report a more successful year, but owing to the continued wet weather and the outbreak of war, very few of the works were completed.

The spring brought the usual cleaning of the grounds and repairs to the roads. The grounds around the buildings I had raked and the rubbish burned. Also a number of improvements were made. A new machine shed was erected for storing our machinery, one end of which is partitioned off for a tool house. In the picnic grounds I had a number of rustic seats made, a driveway constructed around the boundary of the park which skirts the lake three-fourths of the way, and a footpath made along the lake shore on the south side of the grounds. This work was very much appreciated by the public.

ROADS.

Two culverts were put in on the main road to the superintendent's house, and two others on the road through the buffalo carrol, and graded up. In my last report I mentioned having started a road from the north of the park to Sandy Beach which I hoped to finish this year. We started to work on this road in May but were soon forced to abandon it for the time being owing to the heavy rainy season which set in very early, making the ground too soft to work. In September we went back to it again, but shortly after the outbreak of the war put a stop to all work, so I am sorry to say that the road is not yet finished. As it serves the double purpose of a road and fireguard, I should like to see this work completed soon, and may add that if the grounds at the beach were laid out and the road finished, Elk Island park would be one of the finest resorts of northern Alberta.

FIREGUARDS.

During June we had so much rainfall that the fireguards could not be disked until the latter days of July and the first of August. The weeds had by this time made such progress that it required a great amount of work to make a success of it, but I am pleased to say that we were able to put it in very good condition.

FENCES.

Last winter we had 1,600 tamarack fence posts taken out by contract, 1,250 of which were delivered on the east side of the park and the remainder at the park buildings, where they were piled up for reserve. We found we had to use the latter quite frequently to replace a broken post here and there, as the old posts are in a very poor state and easily broken, owing to the fact that they were put into the ground with the bark on. In the early spring I had the 1,250 posts on the east side peeled and treated with antiseptine, and during the summer these were set in place in the east fence, with the exception of a few sloughs which were full of water. This fence should stand for years, and it would be well if the remainder were treated in the same manner.

HAYING.

In former years we experienced considerable trouble in having our hay put up by contract, so this year we purchased a mower and hay rake and put up the hay by day labour. This method has proved very satisfactory. Two hundred tons of first-class hay were put up, at a much smaller cost than formerly, and owing to the fact that we were ready to start haying at the proper time we were favoured with excellent weather.

VISITORS.

Owing to the foot-and-mouth disease in the United States, the park was closed to the public on November 16. Up to this time we had 1,457 visitors, most of whom seemed very much pleased with the park in general. It would be a good thing if we had more boat accommodation, and I would suggest that the lake be stocked with fish suited to its nature. Years ago numbers of jack fish were caught here, but they appear to be run out as none have been caught in the past five years.

ANIMALS.

I am pleased to report all the animals in fine condition. We have an increase of sixteen buffalo, with the loss of one old bull which was shot in November in order to save the head and robe, as it had become too thin to stand the winter, leaving ninety-seven buffalo in the park. When on my rounds of inspection I have seen some very fine elk, and counted twenty-two of all ages and sizes in one herd. The total number

of these animals in the park is estimated at forty-seven. An increase of five fine moose calves makes a total of thirty-one moose. The mule deer are very plentiful, but there is no accurate way of counting them, and judging by the tracks all through the park we have estimated the number to be eighty.

In conclusion, I wish to express my appreciation of the ready help afforded me by yourself and other officials in carrying on the work.

I have the honour to be, sir,

Your obedient servant,

ARCH. COXFORD,

Superintendent, Elk Island Park.

APPENDIX No. 6.

REPORT OF THE SUPERINTENDENT OF WATERTON LAKES PARK.

WATERTON MILLS, Alta., March 31, 1915.

SIR,—I have the honour to submit herewith my first report as superintendent of Waterton Lakes park, for the fiscal year ending March 31, 1915.

The office of superintendent for this park was not filled till my appointment in September, 1914. The work, since the setting apart of the area for park purposes in 1910, has been under the supervision of the forest ranger, Mr. J. G. Brown.

EXTENSION OF BOUNDARIES.

During the year the boundaries of the park were extended as far as the international boundary on the south and towards the Crowsnest railway on the north, the area now inclosed covering 423 square miles.

When this portion of the Rockies was first selected as a national recreational ground, the southern boundary extended from the Continental Divide six miles along the northern boundary of Glacier National park, United States, and along the British Columbia boundary for 9 miles to the northwest, giving an area of 54 square miles. When the parks were re-established under the new Act of 1911, Waterton Lakes, in common with all Dominion parks in the Rockies, suffered a reduction in area, the boundaries being cut down to include only 13.5 square miles.

In September last, however, the area was enlarged to include some 22 miles along the international boundary and touching Glacier park, Montana, and a strip of mountain country approximately 12 miles wide extending in a northwesterly direction along the British Columbia boundary to the west branch of the south fork of the Oldman river in the south Kootenay pass. This gives an area of 423 square miles of as varied and magnificent scenery as is to be found in all the Rockies.

This park is the pleasure ground for the people of the Crowsnest pass, Lethbridge, and southern Alberta districts generally.

FIRE AND GAME PROTECTION.

With the enlargement of the park area there was an addition to the staff for the protection of the forests and game. A chief fire and game warden was appointed, together with subwardens, and these men are stationed at points where they are able to keep a careful watch over the trails leading into the park. Their vigilance has very largely prevented infractions of the law with regard to the protection of game. In fact, the only infringement was that of killing a deer within the restricted area, and in this case a conviction was secured.

There was no trouble with fire during the year, due largely to the fact that no railroad touches or traverses the park; not even an incipient blaze was reported, notwithstanding the many tourists occupying tents, and cooking by open fires.

PARK IMPROVEMENTS.

During the year a boulevard of about 750 feet extending around the south shore of the beautiful bay in front of block 3, and two public reserves on the same bay were cleared of brush and dead timber, and are ready for walking and picnic parties next season.

Considerable work has been done on the wagon road leading to the park from Pincher Creek and Macleod. Rocks have been removed and holes filled up as far as the boundary of the park. The members of the Pincher Creek Automobile Club have picked rock and filled holes on the same trail outside the park limits, and have erected



Waterton Lake, Waterton Lakes Park.

finger posts at all turns of the road from Pincher Creek to the camping grounds on the upper Waterton lake.

A grade was also made, and other improvements effected on the wagon road inside the park limits which leads to Cardston, Glenwood, Mountain View, and other eastern towns. It is hoped that next year a bridge over the difficult ford at Waterton Mills will be constructed, thus giving autoists of Macleod, Lethbridge, and other southern Alberta towns a good road and safe crossing to Waterton Lakes park.

Temporary living quarters have been made for the superintendent and chief warden on the upper shores of the middle Waterton lake, and repairs have been effected to make the old cabins of the forest rangers habitable for our park wardens.

We are hoping for an extension of the government telephone system from Twin Butte to connect with Waterton Lakes hotel, thus giving tourists an opportunity to reserve hotel accommodation, and make inquiries concerning the weather, etc., before coming in.

A post office in the park is a great necessity, and there is reasonable assurance that before the camping season opens this summer, a bi-weekly mail and stage service will be established from Pincher Creek.

LOTS, BUILDING, AND ACCOMMODATION.

A survey of 150 building lots, each 75 feet by 150 feet, in desirable locations on the middle and upper Waterton lakes has been made, and a large number of these have been applied for.

One new cottage was erected this year, and plans are being prepared for others to be built during the coming summer.

The large new Waterton Lakes hotel was completed in July last, giving ample dining accommodation, and providing eleven bed-rooms. These, in addition to a large number of new tents and the use of the old hotel for sleeping quarters, will give excellent service to tourists next season. In connection with the hotel there is also a dancing pavilion.

A large frame barn for livery and feed purposes has also been erected, and visitors with horses will be able to secure feed and stabling at reasonable rates. Pack and saddle ponies and light rigs may be hired for transportation to fishing and scenic points in different parts of the park, and licensed guides will be available to safely conduct parties wherever they may wish to go.

A 6-horsepower gasoline launch is busy every day making trips to the head of the upper lake, 3 miles into Glacier park, and to the excellent fishing grounds in the lower lake and Waterton river. New row-boats have been purchased for the boat livery, and lovers of water sport may be assured of the very best service this summer.

FISHING.

No better sport for the angler can be obtained anywhere in the Rockies than in the creeks throughout the park.

In the northern portion the south branch of the South Fork, and a branch recently named Castle river, Beaver, Whitney, Gladstone, and Drywood creeks, there is an abundance of speckled trout, while the Waterton river and Belly river in the south daily yield their strings of the finny tribe.

Waterton lakes, a chain of three picturesque bodies of water some 16 miles in length, Cameron, Bertha, and Beaver lakes, smaller sheets of from 1½ to 3 miles in length, are well stocked with lake trout, and afford no end of sport to the fisherman.

GRAZING AND TIMBER.

Settlers adjacent to the park express themselves as being thoroughly satisfied with the conditions under which grazing for stock and permits for timber are issued. From November 1 to the present date, stock has been allowed to graze free of charge, and many settlers have taken advantage of this concession.

TOURISTS.

The season of 1914 saw a marked increase in the number of visitors, and a freer interchange of tourists between this park and Glacier park across the boundary line. The number of tourists in Waterton Lakes park in 1914 was approximately:—

Registered at hotel.	900
Campers and visitors.	1,100
Total.	2,000

I have the honour to be, sir,
Your obedient servant,
ROBERT COOPER,
Superintendent, Waterton Lakes Park.

APPENDIX No. 7.

REPORT OF THE SUPERINTENDENT OF JASPER PARK.

JASPER, ALTA., March 31, 1915.

SIR,—In the absence of Lt.-Colonel Rogers, superintendent, I have the honour to submit herewith the report of the work in Jasper park for the fiscal year ending March 31, 1915. Lt.-Colonel Rogers left on August 20, 1914, for Ottawa, where he was appointed colonel in command of the 9th Battalion, Canadian Expeditionary Force. Since his departure the affairs of the park have been under my jurisdiction, subject to your direct supervision.

Owing to the unfortunate financial depression which prevailed in the early part of the year which was accentuated by the beginning of the war, a number of the enterprises connected with the growth of the park and proposed by outside capital did not mature, and the progress and improvements made on the part of the public were not very great. Some of these matters have only been temporarily postponed and will be commenced and carried to completion as soon as the financial difficulties are over.

During the past year the government expenditure has been largely concentrated in and about Jasper townsite, but at the same time, the following road, trail and bridge construction has been completed:—

A standard road was built from the townsite to the Athabaska river, about 1½ miles in length, to connect with the drive to Maligne canyon. A branch from this road leads off to the proposed site of the Canadian Northern Railway depot.

At the Athabaska river, a temporary pile bridge was constructed, which proved a great convenience to the public, the Athabaska being dangerous and difficult to ford for three or four months each summer. During the high water, a couple of bents in the centre of the bridge were washed out, but, by using wire cables, a part of the bridge was suspended and remained in use all year. Further strengthening cables and repairs the latter part of this year have placed the bridge in such a condition that it is hoped its usefulness will remain unimpaired for some time.

The site for the permanent bridge has been selected alongside the temporary structure, and before the latter has outlived its usefulness, a steel bridge should be placed in position.

The main road leading from the Athabaska to the Maligne canyon is about half completed, and affords beautiful views of numerous small lakes. The uncompleted portion is quite passable for carriages, and numerous parties took advantage of this last summer to visit the shelter at the canyon and inspect the wonders of the canyon itself.

From Maligne canyon to Medicine lake, the trail has been improved, and on the shore of Medicine lake a new trail constructed.

From Medicine lake to Interlaken a complete new trail has been built, passing Jack lake (an unusually good fishing lake) and down the Rocky river, where the scenery is very striking. The round trip by this trail from Jasper and back is a nice short tour for those wishing to make a trail journey that is not too long.

A trail to the top of Goat mountain, 7,500 feet in height, and just across the Miette river from Jasper, has been built. A view of the whole nearby country lies beneath the eye of the tourist who makes this short climb of about three miles. The panorama, which includes Jasper townsite, the Miette and Athabaska rivers, and lakes and mountains in every direction for 40 or 50 miles, provides a kaleidoscope of rare attraction, and makes the trip well worth taking.

From the end of the trail on the west bank of the Athabaska river some 8 miles from Jasper, a trail has been built to the foot of Geikie mountain and close to the large glacier on its northern side. Geikie is the highest point in the immediate vicinity of Jasper, rising to over 10,000 feet above the sea.

Repairs and improvements to the Pyramid Lake road make it easier to reach this ideal summer resort.

The trail from Pocahontas to the Miette hot springs has been widened and improved, a number of the worst grades eliminated, and the ride to the springs can now be done easily in two and a half hours.

These hot springs continue to receive large patronage, notwithstanding the meagre accommodation for visitors. A large number of severe cases of rheumatism are reported as having been relieved and complete cures are stated in a number of cases.

From mile 80 on the Canadian Northern railway, opposite Pocahontas, a trail has been cut up Moose creek some 15 miles, giving access to the great north country, which is full of game, also adding to the possibilities of fire protection in the park.

A short trail was cut during the summer from the old main trail through the park to the Athabaska falls. These falls are some 60 feet in height, on the Athabaska river, about 25 miles south of Jasper.

Canadian Northern Railway.—During the year the Canadian Northern railway completed laying steel through the park, and have now connected up this portion of the line with Vancouver, giving two completed transcontinental railways crossing the widest part of the park.

Telephone System.—The inauguration of a telephone system for the use of the wardens and fire protection has been begun, and about 50 miles of it is in operation, but so far the public have not been given the privilege of subscribing. A public telephone exchange will be a matter for future development as the population increases and the warden's system will form a nucleus from which the public system can be extended.

Townsite Improvements.—All the streets in Jasper, except one block have been rough graded. The central portion has been surfaced and the boulevards and sidewalks marked out with boulders.

Forty-six lots have been taken up by the public, and buildings to the value of approximately \$35,000 have been erected.

In addition to the above the Anglican church, valued at \$1,000 has been erected; the Union church at \$1,000, and the school house at \$1,200.

Many more would have leased lots and built upon same had not the war put a stop to the work in and around Jasper.

A blacksmith shop, driving shed, and fire hall have been added to the permanent government buildings at Jasper.

The athletic grounds were very much appreciated by the public during the summer, football and baseball being indulged in. The tennis courts were also partially completed. During the winter months the Athletic Association here had a skating rink on part of the grounds.

Golf links were also located by Sir Arthur Conan Doyle, as referred to in the latter part of this report.

Park Extension and Boundaries.—The park area was extended during the year to 4,400 square miles, making it one of the largest parks in North America. This necessitated an addition to the staff of wardens, and will mean further additions in the near future.

The northern boundary of the park is at present not marked clearly, and the acting engineer has made the suggestion that a part of this boundary be defined by the Canadian Northern Western Alberta Railway right of way up Solomon creek until it diverges north of it. From that point westward a survey will have to be made and the lines cut out. At present, hunters and others are in doubt as to whether they are in the park or not.

Game in Park.—The game is reported to be increasing and becoming tamer. A number of sheep and goats are to be seen on various points on the mountain near the railway. Deer are coming down, even into the townsites. Rabbits are becoming so thick that they are a nuisance, and are destroying some of the young growth. It is expected that the disease which carries this little animal off will be prevalent shortly. Beaver are increasing rapidly. Bear and other large game are also to be seen quite frequently in the park. Good fishing is to be had in the various lakes and rivers.

Fire Protection.—During the past year the park has been fortunate in escaping serious fires, and from now on the danger should decrease every year. The increasing number of trails and the installation of a telephone system for the wardens will make the concentration of a fire-fighting force easier and quicker, and in this connection the fact that there are two completed railways running through the widest part of the park should be of considerable advantage. Also the completion of construction of the Canadian Northern railway will remove a former source of danger, the number of men employed being fewer and of a better and more permanent class.

Forestry.—This is a matter of development which might be undertaken in the future with great success, and experiments in regard to all kinds of arboriculture would, I am sure, be a distinct feature from a scenic point of view.

VISITORS.

Amongst the distinguished visitors to this park this year were Sir Arthur and Lady Conan Doyle and party. They visited a number of the points of interest and



Photo by W. J. Topley.

Sir Arthur and Lady Conan Doyle on Pyramid Lake, Jasper Park.

expressed themselves delighted with everything they saw. Sir Arthur kindly gave his assistance and practical knowledge to the laying out of a nine-hole golf course on a plateau overlooking Jasper townsite and close to the site of the proposed Grand Trunk Pacific hotel. Sir Arthur has had some previous experience in laying out

golf links, and expressed his opinion that the Jasper Park course would be a very sporting one, combined with a situation where there were such magnificent and varied views of the mountains.

Before leaving Sir Arthur composed the following poem:—

THE ATHABASKA TRAIL.

My life is gliding downwards; it speeds swifter to the day
When it shoots the last dark canyon to the Plains of Far-away.
But while its stream is running through the years that are to be
The mighty voice of Canada will ever call to me.
I shall hear the roar of rivers where the rapids foam and tear,
I shall smell the virgin upland with its balsam-laden air,
And shall dream that I am riding down the winding, woody vale,
With the packer and the pack-horse on the Athabaska trail.

I have passed the warden cities at the eastern water-gate,
Where the hero and the martyr laid the corner stone of State,
The habitant, coureur des bois, and hardy voyageur,
Where lives a breed more strong at need to venture or endure.
I have seen the gorge of Erie, where the roaring waters run,
I have crossed the Inland Ocean, lying golden in the sun,
But the last and best and sweetest is the ride by hill and dale,
With the packer and the pack-horse on the Athabaska trail.

I'll dream again of fields of grain that stretch from sky to sky,
And little prairie hamlets, where the cars go roaring by,
Wooden hamlets as I saw them—noble cities still to be,
To girdle stately Canada with gems from sea to sea;
Mother of a mighty manhood, Land of glamour and of hope,
From the eastward sea-swept islands to the sunny western slope,
Evermore my heart is with you, evermore till life shall fail.
I'll be out with pack and packer on the Athabaska trail.

ARTHUR CONAN DOYLE.

JASPER PARK, June, 1914.

I have the honour to be, sir,

Your obedient servant,

N. C. SPARKS,

Acting Superintendent, Jasper Park.

APPENDIX No. 8.

REPORT OF ACTING SUPERINTENDENT OF REVELSTOKE PARK.

REVELSTOKE, B.C., January 15, 1915.

SIR,—I have the honour to submit herewith my first report of Revelstoke park for the fiscal year ending March 31, 1915.

For a number of years the residents of the city of Revelstoke have endeavoured to have a portion of the country to the north of the city, including mount Revelstoke and the Clach-na-coodin group of mountains, opened up and developed so that it would provide a pleasure resort for themselves, and also furnish sufficient attraction to the tourists to entice them to tarry a few days to enjoy the scenery surrounding their city.

The first effort put forth in this direction by the city was in the construction of a pony trail leading from the city to the summit of mount Revelstoke (6,150 feet). Later a small cabin or chalet was built at the top, which was equipped with stove, bunks, and a quantity of cooking utensils. During the summer months, numbers of the

residents availed themselves of the opportunity of using this shelter and would often spend a week or more there enjoying the invigorating air and matchless scenery.

Others packed up tents and other camp paraphernalia in order to enjoy their outing more in the open. Needless to say numbers of exploration trips were made from the summit as a base, and the stories brought back to the city, together with the many magnificent views of the beautiful lakes, high, snow-capped mountains, and glaciers, roaring mountain streams, and flower-laden valleys and hillsides, soon attracted greater numbers. The idea was then conceived of building a motor road to the summit of mount Revelstoke.

The natural attractions of the district were sufficient to induce the Provincial Government to make a survey of the route to the summit, and later to begin construction. Some three and a half miles were opened up for traffic. In the spring of 1914 it was decided by the Dominion Government to set apart an area of approximately 100 square miles of this territory, lying between the Columbia and Illecillewaet rivers, as a new national park to be called Mount Revelstoke park.

The policy of the Parks Branch is to rush this auto road to completion, and when finished, Revelstoke park will be able to lay claim to having an auto drive attaining to a higher altitude than any other park on the continent, if not in the world. Further, it is proposed to prepare a golf course at the summit among the many alpine meadows, thus enabling visitors to enjoy this popular pastime "above the clouds."

A short description of the route may be in order here. Leaving the Canadian Pacific Railway's depot at Revelstoke, we proceed westward through the city for about a mile, then turn north on to the "Big Bend" wagon road. This road is followed for about one and one-quarter miles, and then a turn eastward is made into the auto road ascending mount Revelstoke. Owing to the topography of the country the road switch-backs east and west behind the city, rising from one bench to another until an elevation of approximately 4,500 feet is reached. Then a long tangent is run to the eastern or Illecillewaet slope, after which the route turns northwesterly to the summit.

The first portion of the route, after leaving the city almost parallels the Columbia river, and passes through good agricultural and fruit-raising country, but on leaving the wagon road it begins to gradually climb the benches, which are clothed with young forests of pine, spruce, cedar, fir, and numerous other varieties of forest trees. Looking below us to the west we see the two large bridges spanning the Columbia river—one a steel structure, the railway bridge—the other a wooden one, the traffic bridge—to the many ranches and orchards on the west side of the river. We also see the railway winding westward through Eagle pass in the Gold range, while farther to the northwest the heavily timbered slopes of Jordan pass are seen with many towering, snow-capped peaks rising far beyond.

As higher levels are reached, mount McArthur (8,364 feet) comes plainly into view to the southwest, while farther south the massive form of mount Begbie (8,946 feet) will be seen, with an immense glacier clinging to its northwest slope.

On proceeding farther eastward, a beautiful panorama of the city of Revelstoke and the many surrounding orchards and farms can be seen, together with the broad expanse of the Columbia river, whose tortuous course can be traced almost to where it empties into Upper Arrow lake at Arrowhead. To the southeast rise mount McKenzie (8,064 feet) and mount Cartier (8,662 feet); a climb to the summit of McKenzie from the railway is only 50 feet short of that from Glacier House to the summit of Sir Donald, while to the summit of mount Cartier exceeds that to Sir Donald by about 550 feet.

Continuing to the summit of mount Revelstoke the view is extended in all directions. Far below the Illecillewaet river winds between the massive peaks to the east and west—its volume swelled by Greely creek which drains the valley between mount Albert (9,998 feet) and mount McKenzie, and Twin creeks coming from the glaciers and snowfields of the two Albert peaks.

From the southerly slopes of the Clach-na-coodin mountains a stream of the same name drains a number of lakes high up on the mountain side, and is fed by the snow and ice from this group, a number of whose peaks are nearly 8,000 feet high.

Immediately surrounding us on the summit are many large upland meadows interspersed with many small lakes. The variegated colouring of these meadows and adjacent hill-sides, on account of the abundance of wild flowers, is beyond description. Violets, daisies, lilies, marigolds, lupins, and heather grow in such profusion that the meadows are veritable flower gardens.

Near the summit is a large rift in the formation, which has been named the "Ice Box." This cleft in the solid rock is about 100 feet long and 20 feet wide, and even in September there are from 15 to 20 feet of snow and ice in the cave.

By crossing a small valley between mount Revelstoke in a northerly direction going toward the Clach-na-coodin group, three pretty lakes, of a beautiful translucent emerald colour are to be found—Millar, Eva, and Ella—all easy of access by pony trail, and all well worthy of the trip.

Within the park is to be found an abundance of fish and game. Several species of grouse are plentiful on the mountains, while bear, deer, and caribou are often seen. The past summer, caribou were seen in the meadows hob-nobbing with the saddle ponies while out at pasture. In the streams—particularly Silver creek, Greely creek, and the Illecillewaet river—are to be found rainbow or cut-throat trout in abundance, while in the Columbia the larger "Dolly Varden" species are often secured weighing from 10 to 20 pounds.

Operations on the construction of the automobile road were started during the second week in July, at which time orders were placed for the necessary tools, road-making machinery, explosives, and boarding camp equipment. Upon these being received, work was pushed along vigorously by a large force of men and several teams, so that when funds were exhausted several weeks later, 2 miles of new road, with necessary bridges, culverts, and cribbing complete had been opened for traffic, and an additional 2 miles had been opened up on which the rock work, cribbing, and bridges were about half completed. About 12,000 cubic yards of rock and earth were removed, and in the construction of bridges about 23,000 lineal feet of round timber were used. Sufficient good material is found on the ground for all such work, but plank has to be purchased for decking for several larger bridges yet to be constructed. With sufficient funds available this coming season the remainder of the road should be opened to the summit before the fall.

With the completion of the present programme of automobile road construction, preparing of golf course, and erection of small chalet at the summit, the opening up of good pony trails to the many points of interest and making these easy of access for the tourist, the city of Revelstoke will be in a position to offer inducements to the traveller which few cities in Canada can furnish. Revelstoke park provides the sight-seer sufficient variety to satisfy the most exacting. The botanist can find ample scope for investigation among the flora, the mountain-climber numbers of trying climbs to test his mettle, while the hunter or fisherman can readily be outfitted with guides, ponies, provisions, etc., for his outing in the solitudes in quest of big game outside the limits of the park. In fact, the natural advantages of the situation of this park provide each and all classes of pleasure seekers with an excellent outfitting base from which the numerous attractions are easily accessible. With sufficient publicity given, this park should in the near future attract large numbers of visitors who would otherwise pass on to other points.

I would suggest that a survey line be run around the park, and this line cut out, so that the wardens can locate the boundaries, as this would assist very materially in the administration of the parks regulations in connection with game and timber.

Your obedient servant,

F. E. MAUNDER,

Acting Superintendent, Revelstoke Park.



Photo by W. H. Horobin.

Lake Eva, Revelstoke Park.

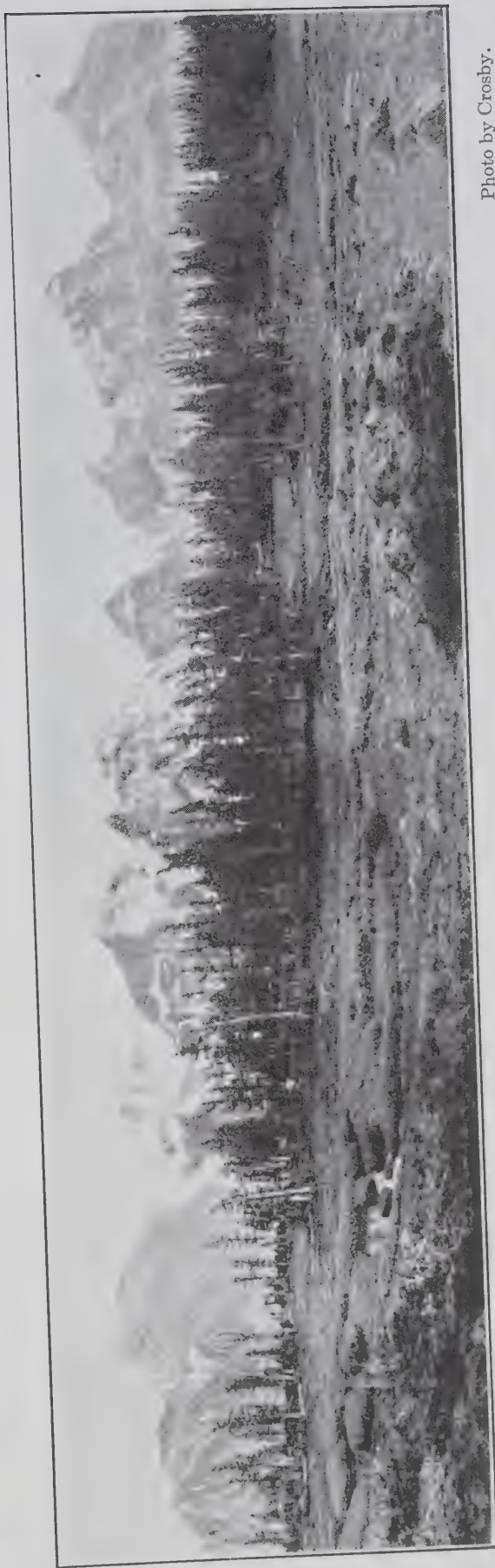


Photo by Crosby.

The Valley of the Ten Peaks, Rocky Mountain Park.

REPORT OF THE ST. LAWRENCE ISLAND PARKS.

These parks comprise the only areas in Ontario administered by the Dominion Government as national recreation grounds, and they serve as an excellent example to show the necessity and value of setting aside such areas at suitable places all over the Dominion. They consist of twelve islands, or parts of islands, and one reservation on the mainland, in all having an area of approximately 140 acres, situated for the most part between the towns of Brockville and Gananoque among the Thousand Islands. Owing to the popularity of the Thousand Islands as a summer resort, most of the serviceable lands in the vicinity are privately owned, and although they are not all occupied, most of them display the sign "Private Grounds" or "Trespassing Not Allowed," and if it were not for these parks, casual picnickers, launch parties, or campers would have no place where they could land except through the kindness of private owners. A trip up the St. Lawrence river during the holiday season will show the daily use that is made of these grounds by hundreds of people.

Each island, or group of islands, as the case may be, is a complete park or recreation ground, and is supplied with a wharf for skiffs and launches, as well as all the equipment necessary for a picnic or camping party, including pavilion, tables, benches, camp stoves, garbage receptacles, closets, etc. Flag poles have been erected near the pavilions from which a Union Jack is always flying and this, with the sign board "Dominion Lands No. 3," or whatever may be the number which designates the particular reservation, indicates the presence of a Dominion park.

Most of the parks have numerous shade trees, and on several of the larger islands, suitable areas have been cleared for large picnics. Each park is in charge of a caretaker, who keeps it neat and clean and enforces the few necessary regulations. All the privileges of the parks are free to any one who desires to visit them, provided the regulations are carefully observed.

Considerable work in connection with these parks was done during the year, as follows:—

Stovin Island.—A new skiff and launch wharf was built in the small sheltered bay south of the island to accommodate the increased demand for wharf room.

Mallorytown Landing.—The wharf at this park had become unsafe and required almost an entire new covering. A playground consisting of about 2 acres was levelled off here and seeded, affording a very suitable place for school picnics.

Grenadier Island.—At this park the old wharf was in need of extensive repairs, but owing to the strong current at this point and the consequent strain, it was decided to repair only a small portion and to build a new wharf in a less exposed position. The old wharf was accordingly re-covered and the piers filled in with stone and a new wharf, 80 feet long, built at the northwest corner of the island in a sheltered channel.

Georgina Island.—Some clearing was done here and an experiment made with rustic cobblestone chimneys for the camp stoves. These chimneys harmonize with the surroundings, and, if they prove satisfactory, the present ordinary stove chimneys, which are constantly in need of repair, and frequently blow down, will be gradually replaced by the more permanent cobblestone kind.

Beau Rivage Island.—A new cement wharf, large enough to accommodate the average river steamers, was built on this island by the Department of Public Works.

In addition to the above improvements there were numerous small renewals and repairs to the pavilions.

BANFF IN WINTER FOR THE AMATEUR ASTRONOMER.

The winter constellations are particularly interesting, viewed from Banff, surrounded as they are by mountains which concentrate a limited canopy overhead, and with the peaks forming ready pointers for the location of the different constellations.

For instance, what can be more beautiful in the beginning of the new year than the magnificent Sirius (the sailor's dog star) apparently just over the northernmost peak of mount Rundle. This luminary, scintillating and flashing in different colours like a magnified precious brilliant, is the most conspicuous as well as one of the nearest fixed stars, although it is one-half million times farther away than we are from the sun. A little to the southeast, right over the highest peaks of mount Rundle, are three bright stars close together, known as Orion's Belt, and forming a dividing line between the ruddy star Rigel to the south. A little further up the sky to the west is the orange-coloured star, Aldebaran (Arabic for Devil), forming the eye of the bull in constellation Taurus. About as far again up the sky is the little group of stars known as the constellation Pleiades. Ordinarily, at lower altitudes, six stars only can be seen without glasses, but at the altitude of Banff, nine are visible. In the early evening, say eight o'clock, Banff time, when the constellations are in the positions above mentioned, immediately over Tunnel mountain to the east will be noticed two stars close together—they are really about 5 degrees apart—and one above the other. These are the twins, Castor and Pollux, with the star cluster of Præsepe in Cancer lower down, and the bright yellow star Capella farther up the sky.

Setting in the northwest over Sawback range is the great cross of Cygnus, whose mighty arms stretch right across the Milky Way. Just below the northern arm, and close to the top of mount Edith, may be seen the blue star Vega. This star is of special interest as the sun, with its retinue of planets, is travelling in that direction at the rate of 12 miles per second, and she is coming towards us at 10 miles per second. In 12,000 years Vega will be the north star, and a magnificent object she will be. If the sun and Vega were now to change places, we should have one hundred times more light than at present.

Topping Cascade mountain, the highest peak of which is 1 mile above the town of Banff, is the pole star, with the pointers of the dipper in Ursa Major over Bankhead.

Sulphur mountain, at the time of writing, points to Jupiter, the mightiest of all the planets setting on the western slope. And over Goat mountain, to the south and east, can be seen the sickle-shaped array of stars forming the constellation Leo, with the bright star Regulus at the end of the sickle handle.

On the western horizon, where the dark outline of mount Massive and the profile of the "Iron Duke" are just visible, may be seen the constellation of the Whale and, portrayed by the converging point of Pisces, the variable star Mira, whose irregularities are such that at certain times it is quite brilliant and at others invisible.

At the zenith right overhead is the great star cluster in Perseus, with the famous nebula of Andromeda a little farther to the northwest.

It is within the range of possibility that a small observatory may be built in Banff, at an easily accessible site, and an astronomical telescope installed. This, with the prospect of Banff becoming a favourite winter resort, would add considerably to the already numerous attractions and render possible an appreciable insight into the immensity and grandeur of the heavens.

J. T. CHILD,

M. Can. Soc. C.E.

BANFF, ALBERTA.

METEOROLOGICAL TABLES.

MAXIMUM AND MINIMUM TEMPERATURES and the General State of the Weather between April 1, 1914, and March 31, 1915, at *Banff*, Rocky Mountains Park.

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1914.			
April 1.....	38.2	8.2	Fair; fine day.
" 2.....	38.8	15.0	Cloudy; fine day; snow on ground 0 to 7 inches.
" 3.....	47.3	29.7	Cloudy; solar halo; thaws much.
" 4.....	49.8	25.0	Fair; very fine mild day; main road dusty in places.
" 5.....	39.3	33.5	Cloudy; rain; snow flurries; all Zoo bear now out.
" 6.....	36.9	31.8	Overcast; Bow river open to above boathouse.
" 7.....	45.8	24.0	Fair; by afternoon main road dry and snow gone.
" 8.....	46.3	26.2	Fair; snow flurries evening, and very light rain.
" 9.....	45.2	29.4	Cloudy; light snow early a.m.; Bow river open to Forty Mile creek.
" 10.....	51.3	29.8	Fair; perfect day; Bow river open; afternoon boating, golf.
" 11.....	56.0	27.6	Fair; very fine day and night; Prairie Anemone 1st in flower.
" 12.....	54.1	32.0	Fair; very fine day.
" 13.....	52.1	34.6	Fair; strong wind afternoon, SW.
" 14.....	51.2	36.9	Fair; fine day; watering main road.
" 15.....	51.2	37.6	Cloudy; light rain.
" 16.....	50.0	32.8	Fair; light rain a.m.; very few patches of snow.
" 17.....	45.4	31.7	Fair; snow flurries; all roads mostly dry.
" 18.....	49.0	27.8	Cloudy; strong wind, SW.
" 19.....	46.0	36.0	Cloudy; heavy rain; fresh snow on mountains.
" 20.....	33.9	28.2	Cloudy; heavy snowfall about 13 inches; very bad walking.
" 21.....	44.0	9.0	Fair; perfect day overhead; slushy and muddy.
" 22.....	49.8	16.8	Fair; fine day; snow in patches.
" 23.....	56.0	30.2	Fair; few patches of snow.
" 24.....	47.3	33.7	Cloudy; light rain and soft hail.
" 25.....	47.2	27.2	Fair; soft hail flurries; many mallard duck.
" 26.....	48.0	21.9	Fair.
" 27.....	50.2	26.9	Fair; snow flurries and very light rain every few minutes.
" 28.....	52.3	32.8	Cloudy; fine day; Zoo Marmots out.
" 29.....	62.1	29.2	Fair; very fine day.
" 30.....	65.0	30.9	Fair; very fine day.
May 1.....	65.9	31.7	Fair; very fine warm day.
" 2.....	60.2	42.2	Fair; rain.
" 3.....	40.2	35.3	Cloudy; rain; light snow; river bed nearly covered.
" 4.....	45.8	32.3	Fair.
" 5.....	47.0	23.9	Fair.
" 6.....	48.8	24.7	Cloudy; cool day.
" 7.....	60.1	23.2	Fair; very fine day.
" 8.....	63.2	29.9	Fair; fine day.
" 9.....	48.0	37.2	Overcast; very heavy rain; fresh snow higher slopes of mountains.
" 10.....	49.0	37.6	Cloudy; rain early a.m.; fresh drying wind.
" 11.....	55.8	32.0	Fair; very light rain; fine day.
" 12.....	60.2	28.9	Fair; fine day.
" 13.....	61.0	30.2	Fair; fine day.
" 14.....	70.1	31.2	Fair; very fine day.
" 15.....	59.3	40.8	Cloudy; heavy rain.
" 16.....	59.2	32.9	Fair; Lake Minnewanka all open.
" 17.....	59.0	27.3	Fair.
" 18.....	54.2	31.1	Fair; rain; thunder.
" 19.....	54.6	33.6	Fair; light rain.
" 20.....	54.0	34.3	Cloudy.
" 21.....	55.2	28.0	Fair.
" 22.....	57.8	33.9	Fair.
" 23.....	64.8	34.9	Fair; aroma from fir trees, etc., in air.
" 24.....	66.8	34.9	Fair; very fine day.
" 25.....	56.1	39.9	Cloudy; rain; gale.
" 26.....	52.0	37.2	Cloudy; light snow flurries a.m.
" 27.....	52.2	30.9	Cloudy; rain; very light snow.
" 28.....	49.3	32.2	Fair; light snow.
" 29.....	60.1	37.8	Fair; very light rain.
" 30.....	68.3	39.0	Fair; perfect day; about 18 plants in flower and 3 bushes.
" 31.....	77.3	30.0	Fair; perfect day; black ants numerous, flying.
June 1.....	73.8	32.7	Fair; very fine day and night.
" 2.....	79.3	37.2	Fair; very fine day.
" 3.....	73.3	45.6	Fair; very fine day.
" 4.....	54.5	47.3	Cloudy; rain.
" 5.....	51.2	39.2	Cloudy; rain.

METEOROLOGICAL TABLES—Continued.

Maximum and Minimum Temperatures and the General State of the Weather between April 1, 1914, and March 31, 1915.—*Continued.*

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1914.			
June 6.....	48.7	41.8	Overcast; rain; cool; clouds low on mountains.
" 7.....	56.3	33.9	Fair; fresh snow on mountains; cool wind.
" 8.....	52.0	42.9	Cloudy; cool.
" 9.....	56.1	41.0	Cloudy.
" 10.....	64.2	40.8	Fair; trace of rain.
" 11.....	59.3	42.7	Cloudy; light rain.
" 12.....	63.0	38.0	Fair; rain during night; fine day.
" 13.....	65.4	45.2	Fair; light rain; fine day.
" 14.....	76.3	37.0	Fair; very fine day.
" 15.....	79.2	40.2	Fair; very fine day.
" 16.....	78.5	42.0	Fair; very fine day.
" 17.....	76.2	44.8	Fair; very fine day; 25 mile wind afternoon, W.
" 18.....	76.0	47.0	Fair; fine day.
" 19.....	69.1	43.2	Fair; very fine.
" 20.....	64.2	44.9	Cloudy; very light rain.
" 21.....	48.5	35.2	Cloudy; rain; some hail; 20 mile wind SW; gale during night.
" 22.....	46.4	36.3	Cloudy; trace of rain; 22 mile wind S.W.; chilly day.
" 23.....	60.9	39.8	Cloudy; rain evening and through midnight.
" 24.....	60.9	38.8	Fair; rain evening and through midnight.
" 25.....	45.2	38.3	Overcast; rain.
" 26.....	63.2	36.2	Fair.
" 27.....	65.0	39.3	Fair; rain 30 minutes; fine day.
" 28.....	65.2	37.2	Fair; light rain evening; fine day.
" 29.....	70.2	39.3	Fair; very fine day.
" 30.....	77.4	40.6	Fair; very fine day and night.
July 1.....	81.1	40.2	Fair; very fine day.
" 2.....	83.3	44.2	Fair; very fine day and night.
" 3.....	84.3	43.8	Fair; very light rain; thunder.
" 4.....	70.5	47.2	Cloudy; rain; thunder; and lightning.
" 5.....	66.1	50.8	Cloudy; rain; thunder and lightning.
" 6.....	73.3	45.3	Fair; very heavy rain 5 a.m. over before 6 a.m.; roads dry and dusty in places by afternoon; very fine day.
" 7.....	76.1	42.6	Fair; very fine day; cool wind.
" 8.....	77.9	54.8	Fair; 20 mile wind S.W. dry; very fine day and night.
" 9.....	82.1	43.2	Fair; very fine day.
" 10.....	82.3	41.3	Fair; very fine day and night.
" 11.....	85.7	45.2	Fair; very fine day.
" 12.....	85.2	52.9	Fair; rain; thunder and lightning; very fine to 5 p.m.
" 13.....	69.2	49.2	Fair; rain.
" 14.....	69.5	52.0	Cloudy; very light rain off and on.
" 15.....	62.0	46.7	Fair; rain.
" 16.....	71.2	34.0	Fair; very fine day.
" 17.....	77.0	40.0	Fair.
" 18.....	81.0	41.5	Fair; very fine.
" 19.....	85.8	46.0	Fair.
" 20.....	65.0	49.8	Cloudy; rain; thunder.
" 21.....	56.8	40.0	Cloudy; 25 mile mind West; fresh snow on mountains.
" 22.....	67.5	52.0	Fair.
" 23.....	73.5	41.0	Fair; rain; meteor.
" 24.....	74.8	40.2	Fair.
" 25.....	71.0	43.5	Fair.
" 26.....	73.0	42.5	Fair; very fine day.
" 27.....	80.5	40.2	Fair; very fine day.
" 28.....	77.2	49.8	Fair; perfect day.
" 29.....	79.8	43.0	Fair; perfect day.
" 30.....	87.8	37.2	Fair; fine day.
" 31.....	90.0	47.0	Fair; fine day; very hot; very light rain.
Aug. 1.....	89.0	44.5	Fair; fine; very hot.
" 2.....	88.0	39.9	Fair; very warm; cloudless sky; light breeze.
" 3.....	87.9	41.8	Fair; very light rain.
" 4.....	69.0	48.9	Cloudy; 20 mile wind S.W. fine afternoon; cool breeze.
" 5.....	80.9	38.0	Fair; perfect day.
" 6.....	76.8	41.7	Cloudy; rain evening and through midnight; cool breeze; fine day.
" 7.....	61.5	45.8	Cloudy; light rain early a.m.
" 8.....	62.0	42.0	Fair; fresh snow on mountains.
" 9.....	60.0	45.0	Cloudy; rain.

METEOROLOGICAL TABLES—Continued.

Maximum and Minimum Temperatures and the General State of the Weather between April 1, 1914 and March 31, 1915.—*Con.*

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum. for day.	Minimum for day.	
1914			
Aug. 10.....	69.2	40.0	Fair; fine day.
" 11.....	72.2	38.0	Fair; fine and bright.
" 12.....	70.0	50.8	Fair.
" 13.....	80.9	37.7	Fair; very fine day.
" 14.....	81.0	38.9	Fair; very fine day; smoke from forest fire.
" 15.....	80.1	38.2	Fair.
" 16.....	64.6	44.2	Cloudy; rain; thunder and lightning.
" 17.....	61.1	41.0	Cloudy.
" 18.....	74.1	37.2	Fair.
" 19.....	74.3	42.3	Fair; very fine day.
" 20.....	76.3	36.5	Fair; evening trace of rain; perfect day.
" 21.....	76.3	41.0	Fair; rain; thunder and lightning.
" 22.....	65.4	41.9	Fair; light rain.
" 23.....	63.8	35.2	Fair; rain.
" 24.....	64.0	38.6	Fair; very fine day.
" 25.....	72.0	31.8	Fair; very fine day.
" 26.....	77.2	39.6	Fair; perfect day.
" 27.....	73.5	38.8	Fair; very fine day.
" 28.....	75.0	48.7	Fair; fine day.
" 29.....	78.0	37.8	Fair.
" 30.....	62.0	43.0	Fair.
" 31.....	62.3	28.0	Fair; fine day.
Sept. 1.....	72.2	28.1	Fair; perfect day.
" 2.....	75.1	32.5	Fair; perfect day, outside of smoke.
" 3.....	75.9	35.0	Fair; very fine day, but smoky:
" 4.....	66.0	46.9	Cloudy; rain; smoky part of a.m.
" 5.....	55.9	43.7	Cloudy; cool.
" 6.....	69.2	31.4	Fair; perfect day.
" 7.....	52.3	40.8	Cloudy; rain; 35 mile wind, NE.
" 8.....	53.1	40.2	Cloudy; rain; fresh snow on higher mountains.
" 9.....	54.2	39.0	Cloudy; up to 35 mile wind, SW.; fresh snow on mountains.
" 10.....	59.3	47.2	Fair; 40 mile wind, SW.; fresh snow disappearing on mountains.
" 11.....	40.1	33.1	Overcast; rain; and snow; 3 inches snow on ground.
" 12.....	43.8	32.0	Cloudy; snow disappearing and drying up quickly.
" 13.....	50.2	30.4	Fair.
" 14.....	43.2	32.0	Cloudy; rain and snow.
" 15.....	36.4	31.0	Overcast; snow.
" 16.....	43.3	30.2	Cloudy; rain during night.
" 17.....	50.6	33.4	Cloudy; rain.
" 18.....	62.9	39.2	Cloudy; rain.
" 19.....	52.0	37.5	Cloudy; rain.
" 20.....	54.7	31.3	Fair; trace of rain; fine day.
" 21.....	50.1	32.2	Cloudy.
" 22.....	58.1	33.2	Fair; fine day.
" 23.....	65.5	32.3	Fair; perfect day; aurora; Delevan's Comet visible.
" 24.....	69.1	33.9	Fair; perfect day.
" 25.....	71.2	35.7	Fair; perfect day.
" 26.....	62.3	39.3	Cloudy; rain; thunderstorm.
" 27.....	51.4	40.3	Cloudy; very light rain; 25 mile wind, SW.
" 28.....	57.2	41.0	Fair; fine day.
" 29.....	64.5	44.0	Fair; very fine day.
" 30.....	65.5	30.8	Fair; very fine day.
Oct. 1.....	48.2	34.6	Cloudy; rain; gale before 6 a.m. for short time.
" 2.....	50.8	37.7	Cloudy; rain; fresh snow on mountains.
" 3.....	35.0	30.6	Overcast; snow; chilly; wet; disagreeable day.
" 4.....	42.2	31.5	Cloudy.
" 5.....	39.8	35.3	Overcast; rain.
" 6.....	51.1	31.3	Fair; perfect day.
" 7.....	42.5	33.0	Cloudy; rain.
" 8.....	42.1	37.7	Cloudy; rain; very fine cloud effect west.
" 9.....	49.6	35.1	Cloudy.
" 10.....	37.2	31.6	Cloudy; trace of rain.
" 11.....	39.1	28.1	Cloudy.
" 12.....	47.2	24.4	Fair.
" 13.....	60.1	39.2	Fair; very fine day; leaves mostly off poplars.
" 14.....	65.0	41.2	Fair; perfect day.

METEOROLOGICAL TABLES—Continued.

Maximum and Minimum Temperatures and the General State of the Weather between April 1, 1914, and March 31, 1915.—Continued.

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1914.			
Oct. 15.....	66.7	33.2	Fair; very fine warm day.
" 16.....	65.8	36.5	Fair; fine day.
" 17.....	57.0	40.9	Fair; rain; 30 mile wind, SW.
" 18.....	49.4	35.2	Fair; very light rain.
" 19.....	46.4	34.9	Cloudy; light rain and snow.
" 20.....	46.1	31.0	Fair.
" 21.....	43.8	23.2	Fair; very fine day.
" 22.....	45.3	21.8	Fair; perfect day.
" 23.....	50.7	22.8	Fair; very fine day.
" 24.....	56.8	30.0	Fair; very fine day.
" 25.....	47.2	27.3	Fair; very fine day.
" 26.....	53.3	27.8	Fair; very fine sunset; very fine day.
" 27.....	55.5	28.0	Fair; very fine day; aurora.
" 28.....	54.0	27.0	Fair; very fine day; aurora.
" 29.....	54.1	28.8	Fair; very fine day.
" 30.....	54.0	38.8	Fair; rain.
" 31.....	46.2	37.7	Fair; rain early a.m.
Nov. 1.....	42.3	33.8	Cloudy; rain.
" 2.....	41.2	32.7	Cloudy; snow.
" 3.....	37.2	29.2	Fair; snow early a.m.; snow going rapidly.
" 4.....	35.5	24.4	Cloudy; snow; light rain; snowbirds.
" 5.....	28.3	25.3	Overcast; snow to near midnight; first sleighing.
" 6.....	32.3	20.8	Fair; 11½ inches of snow on ground a.m.
" 7.....	35.2	11.8	Fair; start of a Chinook wind.
" 8.....	46.1	31.8	Fair; rain during night; 30 mile wind, SW., Chinook; sleighing bad; much snow goes.
" 9.....	37.6	27.8	Fair; light snow early a.m.
" 10.....	33.8	27.3	Cloudy; snow during night.
" 11.....	39.4	29.3	Fair; thaw; fine day.
" 12.....	31.3	22.7	Cloudy; light snow early a.m. and heavier snow during night.
" 13.....	19.8	13.8	Cloudy; snow and light snow during night; good sleighing.
" 14.....	16.5	4.9	Cloudy; wild geese flying south during night of 12th.
" 15.....	12.3	- 8.9	Fair; Bow river frozen above boat-house.
" 16.....	14.0	-15.1	Cloudy; very large solar halo.
" 17.....	25.8	12.3	Fair; grand sunset after glow.
" 18.....	25.9	13.5	Fair; gale 40 mile, west; fine sunrise; snow drifting.
" 19.....	32.2	18.9	Cloudy; skating on Bow river.
" 20.....	39.9	29.6	Fair; very large solar halo; thaw.
" 21.....	39.5	26.2	Fair; thaw.
" 22.....	42.8	28.2	Fair; gale 45 to 55 miles SW.
" 23.....	38.0	31.1	Cloudy; 25 mile wind, SW.
" 24.....	48.3	35.9	Fair; sleighing bad; Bow river opening; gale 40 mile wind SW.
" 25.....	48.3	40.2	Cloudy; rain with snow during night; gale 60 miles S.W.
" 26.....	39.2	25.3	Cloudy; Bow river open little above boat house.
" 27.....	42.0	28.0	Fair; very fine; mostly calm mild day; snow on ground 0 to 4 in
" 28.....	39.3	29.9	Fair; soft hail; from 22nd to 25th chinooking with low humidity.
" 29.....	31.2	21.1	Cloudy; trace of snow.
" 30.....	23.8	12.8	Fair; fine mostly calm bright day.
Dec. 1.....	28.0	6.2	Fair.
" 2.....	27.9	18.3	Fair; fine day and night.
" 3.....	26.9	15.0	Cloudy; light snow; skating again.
" 4.....	18.4	6.0	Fair; fine, clear, calm day.
" 5.....	17.2	3.6	Fair; light snow; afternoon clear, calm, cold.
" 6.....	23.1	3.8	Fair.
" 7.....	7.2	-5.3	Cloudy; trace of snow.
" 8.....	11.3	1.1	Fair.
" 9.....	9.9	-10.6	Fair; calm; clear; cold.
" 10.....	7.9	-13.2	Fair; calm; clear; cold; Lake Minnewanka frozen over.
" 11.....	1.7	-17.5	Fair; calm; clear; cold.
" 12.....	5.7	-14.2	Fair; calm; clear; cold; much slush ice and anchor ice in Spray river past week.
" 13.....	15.0	- 6.0	Fair; clear; fine day.
" 14.....	4.9	- 9.2	Fair; calm; clear; cold.
" 15.....	6.0	-18.1	Fair; calm; clear; cold; ice jam Spray river.
" 16.....	9.2	-12.5	Fair; Lake Minnewanka ice 9 inches thick; clear sky.
" 17.....	8.5	-1.7	Fair; 20 mile wind SW. Spray river more jammed with ice.

METEOROLOGICAL TABLES—Continued.

Maximum and Minimum Temperatures and the General State of the Weather between April 1, 1914, and March 31, 1915.—Continued.

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1914.			
Dec. 18.....	10.0	-11.1	Fair; bright; cold.
" 19.....	7.6	- 6.8	Fair; fine; clear; calm.
" 20.....	15.0	- 8.9	Fair; fine; milder day.
" 21.....	19.3	8.8	Cloudy; trace of snow.
" 22.....	25.2	12.9	Cloudy; 20 mile wind SW.; solar halo.
" 23.....	30.9	21.9	Cloudy; Spray river very much blocked with ice.
" 24.....	24.3	14.2	Fair; very fine day.
" 25.....	24.2	9.2	Overcast; light snow day and heavier during night.
" 26.....	21.3	0.2	Cloudy; ice on Bow river 18 inches thick.
" 27.....	24.0	4.7	Cloudy.
" 28.....	21.9	10.9	Fair; fine day.
" 29.....	20.0	3.2	Fair; light snow early a.m.
" 30.....	27.3	13.2	Fair; light snow during night; fine mild light winds.
" 31.....	31.2	23.2	Fair; very fine day; ice on Bow river 20 inches thick; sleighing bad all month with 0 to 5 inches of snow on ground.
1915			
Jan. 1.....	30.0	10.8	Cloudy; very fine sunrise; snow flurries.
" 2.....	33.2	26.0	Cloudy; 30 mile wind SW.; fine sunrise.
" 3.....	37.4	26.9	Fair; snow during night.
" 4.....	26.3	16.8	Fair; snow morning.
" 5.....	16.0	- 3.6	Fair; mostly calm; clear; perfect day; sleighing good again.
" 6.....	18.7	- 3.1	Fair; 25 mile wind SW.; snow drifting.
" 7.....	27.3	9.9	Cloudy.
" 8.....	27.7	18.9	Cloudy; trace of snow; fine night.
" 9.....	31.7	22.1	Cloudy; light snow.
" 10.....	29.0	17.1	Fair; 35 mile wind SW. gale; snow drifting.
" 11.....	34.1	24.2	Fair.
" 12.....	31.2	19.8	Cloudy; trace of snow; Bow river ice as cut 24 inches.
" 13.....	18.9	0.2	Fair; fine and bright; sleighing bad 12th.
" 14.....	21.9	2.7	Fair; very fine day.
" 15.....	18.0	2.2	Fair; light snow; fine day.
" 16.....	23.0	1.0	Cloudy; 25 mile wind SW.
" 17.....	31.2	16.9	Fair; 25 mile wind W.; chilly.
" 18.....	32.9	22.8	Cloudy; 25 mile wind W.; chilly.
" 19.....	34.0	23.2	Cloudy; 30 mile wind SW.; mild; fine day.
" 20.....	26.4	14.8	Cloudy; snow; 7 to 12 inches snow on ground.
" 21.....	5.7	-14.0	Fair; very fine sunset.
" 22.....	17.2	-12.2	Fair; 25 mile wind W.; chilly.
" 23.....	18.2	7.9	Cloudy; light snow during night; very fine sunset; ice on Bow river as cut 23½ to 25 inches.
" 24.....	10.0	-12.0	Fair; very large solar halo; chilly.
" 25.....	18.2	4.0	Cloudy; snow; 25 mile wind NE.; snow drifting.
" 26.....	2.2	-13.2	Cloudy; light snow; snow drifting a.m.
" 27.....	14.9	-19.9	Fair; gale 32 mile wind SW.; bright; cold.
" 28.....	19.0	- 5.2	Fair; very fine day.
" 29.....	27.2	- 6.4	Fair; perfect day.
" 30.....	25.3	- 4.2	Fair; perfect day Bow river ice 27 inches.
" 31.....	34.3	6.3	Cloudy; fine day; 5.50 to 10.50 inches snow on ground; 20 mile wind SW.
Feb.			
1.....	32.3	18.9	The 27th coldest day of winter.
" 2.....	26.9	4.4	Cloudy; light snow; very fine sunrise.
" 3.....	30.3	20.3	Fair; snow during night; very fine day; solar halo.
" 4.....	32.2	12.8	Cloudy; snow a.m.; mild.
" 5.....	27.9	13.0	Cloudy; trace of snow.
" 6.....	36.0	15.1	Cloudy; fine day.
" 7.....	40.0	9.1	Fair; very fine and mild; sap running in aspens.
" 8.....	40.9	10.9	Fair; perfect day; thaw.
" 9.....	37.0	17.0	Fair; very fine and mild.
" 10.....	36.3	12.3	Cloudy; very fine and mild; clear night.
" 11.....	37.1	15.3	Fair; very fine, mild day; fine night.
" 12.....	35.7	3.2	Fair; very fine day.
" 13.....	25.0	18.8	Fair; fine day; ice on Bow river 27 inches.
" 14.....	25.1	-8.5	Cloudy; snow; gale 8 a.m. about 1 hour.
			Fair; gale 35 mile wind S.W.

METEOROLOGICAL TABLES—Continued.

Maximum and Minimum Temperatures and the General State of the Weather between April 1, 1914, and March 31, 1915.—Continued.

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1915.			
" 15.....	34.1	17.2	Fair; 20 mile wind S.W.; chilly.
" 16.....	40.2	14.8	Fair; 25 mile wind S.W. Chinook.
" 17.....	43.0	34.0	Cloudy; snow during night; thaw; gale during night.
" 18.....	30.8	17.1	Cloudy; snow flurries.
" 19.....	29.2	10.4	Cloudy; snow light a.m. and evening; chilly; N.E. wind 5 p.m.
" 20.....	27.2	18.7	Cloudy; 7.50 to 13.50 inches snow on ground.
" 21.....	30.2	-5.8	Fair; perfect day.
" 22.....	38.6	2.0	Fair; chilly wind.
" 23.....	37.5	14.0	Fair; fine day.
" 24.....	37.3	3.2	Fair; fine day; very fine sunrise glow.
" 25.....	40.0	7.1	Fair; trace of snow during night; large lunar halo.
" 26.....	38.3	13.3	Cloudy; very fine night.
" 27.....	37.3	18.1	Fair; very fine day.
" 28.....	36.0	7.2	Fair; very large solar halo. Bow river ice 28 inches; 3 to 12 inches snow on ground.
Mar. 1.....	39.2	17.2	Fair; sleighing bad in places; very fine day.
" 2.....	35.2	4.2	Cloudy; sleighing still good on sheltered roads.
" 3.....	38.0	5.3	Fair; sleighing bad north side of Bow river.
" 4.....	38.3	13.9	Cloudy; solar halo.
" 5.....	40.7	23.2	Cloudy.
" 6.....	39.8	12.1	Fair; perfect day; snow on ground 0 to 9 inches.
" 7.....	41.1	7.2	Fair; perfect day.
" 8.....	42.9	11.5	Fair; very fine day; very large solar halo; aurora.
" 9.....	42.3	8.2	Fair; perfect day; sleighing only on south side of Bow River.
" 10.....	43.3	18.8	Fair; very fine; mild; thaws much.
" 11.....	41.6	19.7	Fair; very light snow.
" 12.....	40.3	12.9	Fair; fine day.
" 13.....	42.3	17.3	Cloudy; main road dry in places.
" 14.....	44.3	26.2	Cloudy; thaws much.
" 15.....	45.7	36.5	Cloudy; thaws very much; very light rain; western robin.
" 16.....	47.0	29.5	Fair; fine day.
" 17.....	53.8	29.5	Fair; fine day; main road dry.
" 18.....	51.6	33.3	Cloudy; Spray river opens up above bridge.
" 19.....	51.0	27.8	Fair; Spray river channel all open; Bow river channel open from boat house to below falls; very fine day.
" 20.....	57.1	24.9	Fair; perfect day; main road dry and dusty; few butterflies about.
" 21.....	61.3	26.1	Fair; very fine day; snow on ground 0 to patches; duck.
" 22.....	61.0	30.3	Fair; very fine afternoon; very large solar halo.
" 23.....	35.7	30.8	Cloudy; light snowfall; raw day; wind N.E. light. Bow river open to Forty-mile Creek.
Mar. 24.....	30.8	23.3	Cloudy; snow.
" 25.....	23.9	8.0	Fair; bright; cold; northerly wind.
" 26.....	42.2	-0.1	Fair; fine day; clear sky; wind coldish.
" 27.....	45.0	11.7	Fair; very fine day.
" 28.....	47.1	18.0	Fair; very fine day.
" 29.....	37.0	28.3	Overcast; raw day; wind N.E. fresh; Bow river all open.
" 30.....	49.2	28.8	Cloudy; snow on ground 0 to very few patches.
" 31.....	50.0	27.4	Cloudy; rain and snow.

DEPARTMENT OF THE INTERIOR

METEOROLOGICAL TABLES—Continued.

RECAPITULATION.

PRECIPITATION.

	Snowfall.	Rainfall.
	Inches.	Inches.
1914.		
November.....	24.7	0.13
December.....	2.9	....
1915.		
January.....	10.6	....
February.....	7.5	....
March.....	2.9	0.01
Total precipitation 50 inches.	48.6	0.14

NUMBER OF FAIR DAYS.

April.....	20
May.....	25
June.....	20
July.....	23
August.....	22
September.....	16
October.....	19
November.....	19
December.....	18
January.....	23
February.....	20
March.....	17
Total fair days for year.....	242

TEMPERATURES.

	Maximum.	Minimum.
1914.		
April.....	65.0° 30th.	8.2° 1st.
May.....	77.3° 31st.	23.2° 7th.
June.....	79.3° 2nd.	32.7° 1st.
July.....	90.0° 31st.	34.0° 16th.
August.....	89.0° 1st.	28.0° 31st.
September.....	75.9° 3rd.	28.1° 1st.
October.....	66.7° 15th.	21.8° 22nd.
November.....	52.2° 25th.	—15.1° 16th.
December.....	31.2° 31st.	—18.1° 15th.
1915.		
January.....	37.4° 3rd.	—19.9° 27th.
February.....	43.0° 17th.	— 8.5° 14th.
March.....	61.3° 21st.	— 0.1° 26th.

Extremes: Maximum—July, 1914, 90°.
“ Minimum—January, 1915, 19.9°.

The winter of 1914-15 was exceptionally fine.

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Canada National Park

Government
Publications

DEPARTMENT OF THE INTERIOR, CANADA

Hon. W. J. ROCHE, Minister. W. W. CORY, Deputy Minister

DOMINION PARKS BRANCH

J. B. HARKIN, Commissioner

870

Annual REPORT OF THE
COMMISSIONER OF
DOMINION PARKS

FOR THE YEAR ENDING
MARCH 31, 1916

1915/16

OTTAWA

PRINTED BY J. DE L. TACHÉ,
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1917

Frontispiece.



Mt. Edith Cavell, Jasper Park.

Photo by G.T.P.R.

(Named in memory of Miss Edith Cavell, the English nurse, who was executed by the Germans, Oct. 12, 1915.)

DEPARTMENT OF THE INTERIOR, CANADA

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DOMINION PARKS.

Following is the fifth annual report of the Commissioner of Dominion Parks. To it are appended reports from the chief superintendent and from the superintendents of the various parks. These naturally deal with the details of the work accomplished in the several parks during the year. My own report, therefore, is principally a general survey of the work, and of the aims and ideals upon which it is based.

DOMINION PARKS BRANCH.

In previous reports I have submitted figures to show that Canada's National Parks already bring into the country very large sums of money through the tourist traffic which they attract, and that this business is capable of tremendous expansion provided a vigorous policy of publicity is carried out and adequate steps are taken to furnish facilities which will enable the tourist to see the charms and wonders of the parks in safety, comfort, and convenience.

TOURIST TRAFFIC.

Perhaps circumstances were never so favourable as at present for effective work with respect to development of the tourist traffic. On account of the war, Europe, which in the past has annually taken a toll of hundreds of millions of dollars in tourist business, is now closed to the pleasure seeker. On the other hand, because of the war the United States is enjoying a period of unprecedented prosperity and its people are financially in a position to spend huge sums upon travel and recreation. At the present time, for all practical purposes, the only field open to them is Canada and the United States.

As soon as the war is over undoubtedly thousands of tourists from this continent will wish to go to Europe to see the battlefields. But the past has clearly established the fact that practically every tourist who visits the Canadian Rockies becomes a "booster" for them. It is therefore imperative that during the war every possible effort should be made to attract tourists to the Canadian mountains in order that when the call of the battlefields sets in there may be thousands of people throughout this continent to whom the call of the mountains shall be strong and who moreover will influence others to "See America First."

While the desirability of attracting tourist traffic on account of its commercial aspect is always evident and always important, the conditions that the war is creating in Canada now make it doubly so. Canada is daily adding huge sums to its national debt on account of war expenditure; and, in addition, thousands of its former producers are now at the battle front. There is nothing in history to suggest that the end of the war will not mean a period of re-construction calling for commercial capacity, together with resourcefulness and elasticity of the nation. If during the war and the years succeeding, millions of dollars can be brought into the country through tourist traffic, a valuable contribution to national welfare will have been made.

It is estimated that 50,000 foreign tourists visited the Canadian mountains last year. If the average expenditure of these tourists was only \$100 each (and this is con-

sidered a very low estimate) it means that five million dollars was added to the circulation of the country—that this amount of money was distributed among the railway men, the livery men, the hotel employees, the merchants, and the farmers of the country. When it is considered that the people of this continent spend hundreds of millions of dollars each year on travel and recreation and that the Canadian Rockies offer a field for travel and recreation unsurpassed in the world, it seems obvious that Canada should and can get a much greater share of the tourist business than she is now getting. With the favourable opportunity which existing circumstances present, and the pressing need of neglecting no potential source of revenue, the present is the psychological moment for redoubled activity in this connection.

CANADA'S SUCCESS.

Canada's success in past years in regard to tourist traffic is an indication of what efficient work can do with respect to succeeding years. In the spring of 1916 "The Committee on the Public Lands" of the House of Representatives at Washington held two special sittings listening to evidence with respect to a Bill then before Congress providing for the establishment of a National Parks Bureau for the United States. I wish to submit some extracts from the committee's report, which constitute striking evidence as to the views held in the United States concerning the tourist traffic in Canada.

The following is from the evidence given by Mr. Richard Watrous, Secretary of the American Civic Association:—

"Canada has been ahead of us on the national park proposition in every respect—in almost every respect. I am going to say, first of all, that that was best illustrated this past summer when the great drift of travel from the East to the West on account of the expositions at San Francisco and San Diego brought out the fact that the Canadian national parks, because of their exploitation, and because of the things that had been done to make them ready for the comfort and convenience and safety of the tourists, drew the great, wholesale travel—I learned on very good authority that of the travel which went west about 75 per cent was routed, either going or returning, by Canadian railroad systems, so they had the business going one way, and the other way was divided up between our four or five transcontinental systems. That meant thousands upon thousands of dollars of cold American cash for Canada, to be credited to its parks."

The following is an extract from the evidence of Mr. Stephen T. Mather, Assistant to the Secretary of the Interior (Washington):—

"I think one reason why Glacier did not get more visitors was because a great majority of the people who went to the expositions returned by the northern routes—75 per cent of them returned by the Canadian Pacific, thanks to the very efficient advertising which Canada has done".

Mr. Horace McFarland, President of the American Civic Association, in his evidence referred to certain literature being issued in connection with American National Parks and said:—

"It does seem to me that if the war should end to-morrow, and the Atlantic lanes should be open and free from any assault, the circulation of these documents in the fashion that is contemplated would probably result in keeping in the United States during 1916 at least \$50,000,000 that would otherwise go abroad. Advertising pays, as has been rather vigorously brought out in con-

nection with the diversion from the States of the people who went up along the Canadian Pacific on their way back from the expositions, and advertising of this nature is so businesslike that I wonder that the Government ever gets away with it".

Mr. Robert Sterling Yard, of the Department of the Interior, Washington, referring to publicity work in regard to the Canadian mountains said:—

"Till then in this country, every man, woman, and child, had been brought up to the belief that the greatest scenery of the world was in Switzerland; and now, in the last few years, they have also added the Canadian Rockies. That is the great word in this country to-day—the Canadian Rockies."

Mr. P. S. Eustis, General Passenger Agent of the Burlington Railroad, dealing in his testimony with the arrangements among the various railways in regard to tourist tickets said:—

"Those coast tickets are on sale just the same as they always have been, the same as they were last year, but a great many of them take in the Canadian park region, for one reason or another. They seem to have better park arrangements in Canada than we have in the United States. We are rather scattered."

HUMAN DIVIDENDS.

The commercial dividends which national parks pay are of such great importance that they cannot at any time be overlooked, but the human dividends they pay in the form of renewed and increased health, efficiency and power—physical, mental, and moral—on the part of the people of Canada, are of much greater moment. Of all Canada's natural resources, the greatest is her men and women. In previous reports I have pointed out the wastage and the havoc wrought among our human assets in normal times of peace, and have urged the extension of national parks work as a means of remedying these conditions. Whatever conditions may have been in the past, the need of a policy calculated to conserve Canada's human assets is now, in consequence of the war, a million times greater. To-day several hundred thousands of the best men of the Dominion are taking part in the war. Thousands of them will unfortunately never return, and many more will come back shattered by bullet, incapacitated by shell. Even those whom circumstances have kept in Canada cannot be expected to emerge from the strain and worry unimpaired. At the end of the war there will necessarily be a period of reconstruction calling for the best efforts of virile and efficient manhood and womanhood. Canada's success within her own borders and her contribution with respect to the Imperial and inter-Ally schemes that are already being discussed will depend on the efficiency of her human assets. The higher the average in regard to the human units, the greater will be her measure of success. With the losses and damage she is sustaining, with the work that lies before her at the conclusion of the war, it follows with absolute logic that nothing should be neglected which will restore and promote the health, the virility and the intelligence of the Dominion's human assets. From this time on, it must be more and more recognized that patriotism not only consists in warfare against a country's enemies without its borders but involves the care of its citizens within.

FUNDAMENTAL FUNCTION.

The ideal with respect to Canada now must be the development of every Canadian to his utmost degree of efficiency. Such efficiency depends entirely on his physical, mental and moral development to minister to which is the fundamental function of



Showing Fire Engine at Spring Ready for use.



Alien Prisoners Working on Castle-Laggan Motor Road.

national parks. Previous reports have dealt at length with this subject to show that to put and to keep the human unit in its most efficient state, recreation in the out-of-doors, especially in those portions of the out-of-doors of outstanding beauty and attractiveness is absolutely essential. The reasons which prove this need not be repeated except to emphasise what is familiar to every one, viz., that an order to go to the seaside or the mountains is the prescription most given by physicians in cases which defy all other methods of treatment.

National parks comprise the most beautiful parts of the Dominion. They are maintained for all the people of Canada—for the ill, that they may be restored, for the well, that they may be fortified and inspired by the sunshine, the fresh air, the beauty, and all the other healing, ennobling, and inspiring agencies of nature. They exist in order that every citizen of Canada may satisfy his soul-craving for nature and nature's beauty; that he may absorb the energy and power of the sunshine and the fresh air; that nature's smiles may be reflected into him and that he may sing with the winds and laugh with the mountain torrents; that he may absorb the poise and restfulness of the forests; that he may steep his soul in the brilliance of the wild flowers and the sublimity of the mountain peaks; that he may develop in himself the buoyancy, the joy, and the activity he sees in the wild animals; that he may stock his brain and his mind as he would a warehouse with the raw material of intelligent optimism, great thoughts, noble ideals; that he may be made better, happier and healthier.

It is true that, situated as they are now, national parks—national health reserves—are not within reach of all the citizens of Canada. However, that is a condition that can gradually be improved, and it is felt, moreover, that national parks as they are may be likened to a great power house in remote mountains which carry light, heat and energy to far-away cities. They proclaim to all the people, in the voice of the country, the necessity for recreation in the out-of-doors, and encourage those who cannot go to the parks to go to other beauty spots—with which Canada abounds—and there re-create themselves by getting in close touch with nature.

THE WAR AND THE PARKS.

The war has naturally exercised a great influence upon parks matters. In the first place it has necessitated a reduction of 50 per cent in the appropriations for parks purposes. In the second it has impressed more forcibly than ever upon those concerned in parks work the importance of the results to be achieved through the development of national parks.

ALIEN LABOUR.

The appropriations for 1915-16 were calculated purely on a maintenance basis. A great deal of new work has been accomplished, nevertheless, through the establishment in the parks of working camps of interned aliens. In this connection I wish to acknowledge the cordial and efficient co-operation of General Sir William D. Otter, in charge of internment operations. At the beginning of the year large numbers of interned aliens were being maintained by the Government. It was felt that it was not good for the prisoners to live for months in a state of idleness; that it would be advantageous for them to have work to do and that having to maintain them in any case it would be good business for the Government to secure with such labour the construction of roads and other public works in the parks. By an arrangement with the internment authorities the parks service undertook to provide suitable camps, foremen to direct the work and transport of supplies for the camps; the guarding, feeding, payment, and control of the aliens to be the duty of the internment service.

The total number of aliens at work in the parks at the end of the fiscal year was 800.

The aliens were employed in the summer months principally on road construction; in the winter on bridge construction, cutting rights of way for roads, cutting of fence posts for buffalo and other animal parks, the making of macadam, and general clearing operations in the woods.

FOREST PROTECTION.

Special progress was made during the year with respect to the protection of the forested areas of the parks from fire, a matter which is of vital importance in parks work. The great forested slopes of the Canadian Rockies contribute very largely to the charm of the mountains. Substitute blackened stumps and gaunt and lifeless rampikes for such areas, and how many tourists would care to visit the parks, how many people would seek or could secure there the recreation and health and vigour which the parks as they are develop in those who visit them.



Each Pack Horse Carries Two Fire Engines.

The two most important developments with respect to forest fire protection concerned:—

The development of a readily portable gasolene pumping engine for putting out fires when they occur; this being so far as can be ascertained the first practical and successful step ever taken to utilize power pumps for forest protection.

A campaign of education calculated to prevent the starting of forest fires.

In regard to the engine it needs no argument to convince any one that the surest way of putting out fire is to apply water. In forest fire fighting it is well known, especially in a mountainous country, very little can be accomplished with buckets. It

is a physical impossibility for men to carry water under fire conditions for any length of time, and it is equally true that when a man has climbed up a rough hill-side with a bucket of water there is usually very little water left in the pail when he reaches the fire.

It is the experience of nearly all who have been concerned in forest protection that most of the big fires are what are called secondary fires. As a rule fires are discovered early enough to permit of their being isolated in a small area. The usual practice then is to have a body of men watch the fire to prevent it spreading from the burning logs, stumps, and humus of the segregated area. Very often a wind storm comes up, carries the fire forward despite the efforts of the watchmen, and a conflagration is the result. It was figured that if water could be got quickly and in quantity on such a confined area, one of the most serious menaces would be removed. It was this that led the parks organization to consider the possibility of a portable gasoline fire engine. For such a purpose it is obvious that light weight and high power are essential. After a number of experiments, an engine has been developed which combines both. It weighs, stripped, 118 pounds; equipped with solid oak base, etc., for work, 143 pounds. This engine is rated 6 horse-power.



Showing Force of Stream Developed by Gasoline Fire Engine.

It delivers 20 gallons of water per minute, through 1,500 feet of hose. Assuming that it would take one man with a bucket ten minutes to deliver 10 quarts of water at a fire, it will be seen that this engine will do the work of 80 men, and of course do it at an insignificant cost.

The engine in its field tests has exceeded expectations. While there were no large forest fires during the year, the engine was tried out in the field in brush-burning operations. Mr. H. E. Sibbald, Chief Fire and Game warden, Rocky Mountains Park, who was in charge of the engine part of the time reported as follows:—

The engine enabled us to burn the brush in large piles within a clearing of 40 feet in very dry weather without scorching the standing trees; also enabled us to keep fire from spreading along the ground and entirely extinguishing

fires before leaving in the evening. Not one fire started up after being put out. We carried the water in one instance over a steep hill, 200 feet high, and along clearing for 600 feet, the gauge showing a pressure of from 85 to 90 pounds. This enabled us, by holding the nozzle close to the edge of the fire, to make a ditch from 4 to 6 inches deep all around the fire from the force of the water. This will relieve us of digging a trench round a fire, as it is through the hidden roots that fires always get away."

Mr. C. Phillips, Fire Warden, who continued in charge of the engine wrote:—

The whole apparatus was given a very fair four day-test at the Alien Detention Camp at Castle mountain last month, while the aliens were burning large piles of brush and small timber, and the pump undoubtedly kept the fire within the required area.

Water was taken from the river and pumped through 800 feet of hose to points where required, varying from 50 to 150 feet above the water level. A pressure of 90 pounds was obtained at the outlet of the pump, and a stream of water was thrown about 40 feet at the nozzle.

An engine of this kind, that can be taken anywhere in the mountains, by manpower if necessary, should be of great value in extinguishing fires which are guarded, and possibly, may be of great use in direct fire fighting. The intention is to use a battery of engines, so arranged that one engine will pump through 1,500 feet of hose to a readily portable canvas basin, and a second unit pump from that, and so on.

EDUCATIONAL WORK.

A great deal of attention was devoted to a campaign calculated to educate the public in the matter of forest protection, and to secure the co-operation of the public in the matter of fire protection.

Practically there are only two kinds of fires, so far as the parks are concerned at any rate; those arising from human causes and those caused by lightning. We cannot prevent fires that are caused by lightning but those of human origin are nearly always the result of ignorance or carelessness. Not one fire in ten thousand is started deliberately. It is simply another case of "not knowing it was loaded"—because the necessity for care is not realized. It is obvious that education is a first necessity. It is agreed that the way to influence the public is to use affirmation and iteration. Moreover, it is well recognized that man is a creature of habit. A campaign of education was therefore launched calculated to force into the minds of the public by affirmation and iteration the necessity of every one helping in forest protection, and to develop as a natural result on the part of the public careful habits with respect to fire.

The policy followed was to secure the printing of suitable fire-warning notices on articles which are used in the woods in order that the warning should constantly be before the people at times when they are liable to start forest fires. As a result of the campaign, fire-warning notices are now published on practically all the match boxes manufactured; notices are inserted in all the rifle and shot-gun ammunition boxes, and are placed on many of the axes made in the Dominion; in the cabs of locomotives operating in the parks; in Bell telephone directories; in railway time-tables; in railway passenger coaches; on dining-car menu cards; on the menu cards and in the guest rooms of the hotels in the parks; in the form of coloured slides in the moving picture shows operating in the parks; on the livery rigs and pony reins in the parks; on the letter paper of hotels and business places in the parks. It is an evidence of the public spirit of the business men of Canada that the various firms who were asked to co-operate in this campaign of education responded promptly and willingly, and in all cases did so at their own expense.

PROTECTION OF WILD LIFE.

Wild life, the protection of which is one of the important features of parks work, occupied a great deal of attention. The activities of the Parks Branch in this connection extended beyond the protection of the wild life in the parks, and included many matters in relation to conservation of game and the fur-bearers of the Northwest Territories; the question of the development of reindeer herds in the Canadian hinterland; the problem offered by wolves and other predatory animals along the international boundary; and, in co-operation with Dr. Gordon Hewitt, Dominion Entomologist, and Mr. James White, Assistant to the Chairman of the Conservation Commission, action in regard to the proposed treaty with the United States for the protection of migratory birds.

CAPTURE OF ANTELOPE.

Special gratification is felt at the capture of a herd of nearly 50 wild antelope, and their location within a fenced park. The antelope, once almost as numerous as the buffalo, in certain portions of the west, is now very rapidly approaching the extinction stage. The herd which has been captured, it is hoped, will assure the perpetuation of this beautiful animal. The capture of the herd was carried out by Mr. Maxwell Graham, Chief of the Animal Division of the Parks organization, and the method followed was a novel one. Discovering the antelope on what appeared to be their summer habitat, Mr. Graham succeeded in building a fence around the area without disturbing them, thus avoiding the shock of capture which in other years has almost always been followed by fatal results.

CATTALO EXPERIMENTS.

For several years this Branch has urged that steps should be taken to carry on cross-breeding experiments with respect to buffalo and domestic cattle with a view to the development of a new type of domestic animal which would not only possess the capacity to rustle and to take care of itself under conditions which are fatal to ordinary range cattle, but which at the same time would possess the additional value of producing a robe like that of the buffalo.

During the year Mr. J. H. Grisdale, Director of Dominion Experimental Farms, undertook to take charge of the cross-breeding work and has made all arrangements for carrying on the experimental work.

PARKS IDEAL.

As I have endeavoured to point out in the previous report, the ideal on which National Parks are being administered is the production of dividends for Canada—dividends in gold and dividends in human units. It is confidently believed that parks, or rather that for which parks stand—recreation in God's out-of-doors—can materially assist in remedying whatever damage the war may do to Canada's human assets. The war, on the other hand, has enabled the Canadian people to find themselves as never before. Canadians to-day possess and know they possess purposefulness, capacity for responsibility and organization, directive ability, discipline. They emerge from the war with a sense of capacity and masterfulness. At its root, patriotism is to a great extent the love of nature as a man knows her in his own country. It is that caress of nature, which is the quality of their country in their own eyes, which has inspired the achievements of Canadians in Flanders. It is the caress of nature which will make Canada's crop of citizens as rugged and sturdy as its mountains, as powerful as its waterfalls, and as brilliant as its sunshine. National Parks exist to-day primarily to guide the Canadian people to close contact with nature.

J. B. HARKIN.

APPENDIX No. 1.

REPORT OF THE CHIEF SUPERINTENDENT OF DOMINION PARKS.

Annual reports from the superintendents of Rocky Mountains Park, Banff, Alta.; Yoho and Glacier Parks, Field, B.C.; Revelstoke Park, Revelstoke, B.C.; Buffalo Park, Wainwright, Alta.; Elk Island Park, Lamont, Alta.; Jasper Park, Jasper, Alta.; Waterton Lakes Park, Waterton Lakes, Alta.; are appended hereto. They are arranged for convenience of reference as in the past, viz:—

1. Report of Chief Superintendent of Dominion Parks.
2. Report of Superintendent of Rocky Mountains Park.
- 2*a*. Report of the Curator of Banff Museum.
- 2*b*. Report of the Alpine Club.
- 2*c*. Analysis of the Nationalities of visitors to the Hotels.
- 2*d*. Report of the Timber and Grazing Inspector.
3. Report of the Superintendent of Yoho and Glacier Parks.
4. Report of the Superintendent of Buffalo Park.
5. Report of the Superintendent of Elk Island Park.
6. Report of the Superintendent of Waterton Lakes Park.
7. Report of the Superintendent of Jasper Park.
8. Report of the Superintendent of Revelstoke Park.

Owing to several changes taking place in the administration of Buffalo and Jasper Parks, the reports of these parks were necessarily not as full as they might have been if material at first hand had been available. These reports were prepared by myself at the request of the Commissioner of Dominion Parks.

ROCKY MOUNTAINS PARK.

The work done and improvements made in the National park at Banff are at once observable to the tourist. The main travel roads have been well graded up and finished off with a top dressing of fine limestone rock, well rolled and bonded, giving a finished gray appearance, and contrasting strongly with the deep green of the timber, and adjacent mass of vari-coloured shrubs and grasses which grow luxuriously along the borders of the roadways.

The principal work done was the regrading, widening, and surfacing of the road from the Bow River bridge to the Cave and Basin; this is known as Cave avenue, and is conceded to be one of the best constructed roads in the park. Other roads have been graded, the heavy underbrush cut and thinned out, for a distance on each side of the road. Considerable improvements have been made to the recreation grounds in the matter of clearing willows and underbrush, thus adding an additional area for further extension and development of this most picturesque of national playgrounds.

The advent of automobiles into the transportation problem of the National park, so strongly opposed by some of the owners of horse-drawn vehicles, has resulted in the opening up of many of the roads and drives hitherto closed to motor traffic.

The motor road from the Prairie cities, within the boundaries of the National park has been carefully attended to and the connecting links remaining uncompleted last year have been coupled up, giving the motorist a splendid scenic drive from



Athabaska Falls, Jasper Park.

Banff, along the valley of the Bow river, skirting the charming Vermilion lakes, with the pinnacle of Mount Edith in the near distance towering some 9,200 feet above sea-level. Mountain sheep are to be seen on the slopes of "Sawback"; to the south, mounts Bourgeau and Brett; in the distance Pilot mountain can be discerned. The car speeds forward through avenues of spruce, balsam, and aspen, crossing numerous streams and mountain torrents, finally the great Castle rock, truly a magnificent pile, bursts into view. Castle station on the line of the Canadian Pacific railway is to the left of the roadway. A mile west the road branches off to the left, and takes a southerly direction, crosses the Bow river by a two-span steel bridge, climbs the north slope of the Boom mountains, following Altrude creek, gradually rising in a series of switchbacks to an elevation of 5,600 feet, and connects at the interprovincial boundary with the uncompleted road via the Sinclair pass into British Columbia. The motorist can proceed on the other branch of the auto road only a few miles beyond Castle, but it is anticipated that during the coming year this road will be completed into Lake Louise, one of the most charming of mountain resorts.

The road from Lake Louise to Moraine lake has received its annual clearing of detritus brought down from the upper slopes by the action of the elements. Torrential rains did considerable damage to this favourite drive; repair gangs were put to work and the roadway put into condition to carry the season's heavy traffic. This favourite driveway requires to be regraded and practically rebuilt on an easier gradient, but with the small appropriation available nothing but ordinary repairs could be made.

The superintendent's report deals exhaustively with the various improvements and requirements of the future, therefore I will not dilate further on the work done in the Rocky Mountains park. In passing I desire to note that tourists visiting Banff for the first time are usually enraptured with the beautiful surroundings, and as they delve deeper into the beauties of the various scenic points, public buildings, superb sulphur baths, the Zoo, the buffalo and deer paddocks, the fish hatchery and boating facilities, they cannot fail to carry away with them a desire to return and bring their friends to further explore the views of hidden grandeur known only to those whose time and means permit an extensive camping tour into the surrounding ranges of mountains.

Owing to the financial conditions and continuance of the war, building operations as respects private residences were a negligible quantity.

The fire-fighting equipment received careful attention. The building allotted to the fire department was improved in many ways. Accommodation was provided for members of the voluntary brigade; the organization and discipline of which are of the finest order. One fire of importance occurred during the year, resulting in the practical destruction of the Alpine Block, owned by Hon. Dr. R. G. Brett, Lieutenant-Governor of Alberta.

VISITORS.

There was a large increase in the number of visitors registered at the various hotels, caused by the extra travel to and from the San Francisco exposition.

YOHO PARK.

Owing to the continuance of the present financial depression and great calls made upon the resources of the Dominion, both in men and money, to carry on the war to a successful termination, all projected new work was postponed, and only that absolutely necessary for the proper maintenance of the various scenic roads and trails was undertaken.

A greater rainfall was noted than in previous years, consequently the roads and trails required constant supervision to keep them in order for the excessive tourist travel which developed during the season. What with the wide advertising given to the scenic beauties of the Dominion parks by distribution of literature and personal talks with the many noted travellers going to and returning from the San Francisco exposition, the "Yoho Park" was the "Mecca" of a great number of tourists who would otherwise have passed onward oblivious of the scenic grandeurs within easy access of the Mount Stephen House at Field.

The winter storms and spring snowslides necessitate an annual clean up of the detritus brought down from the upper slopes. A small gang was employed to open the road to Takakkaw falls via Yoho canyon. When this was finished the work of widening the second canyon, left unfinished from the previous year, was undertaken, the material being solid rock; the roadway between the first and second canyon, about half a mile in length, was widened and gravelled. The upper slope of the "Switch-back" showed signs of falling and blocking the roadway; to prevent this the entire length was "log cribbed" and the road made secure for traffic.

Repairs were necessary on the new grade between the four and five-mile posts, owing to the erosion of the upper slope from climatic conditions.

There is considerable fallen timber along the driveway between miles four and a half and six, which must be an eyesore to the travelling public; it should be cleared up and judiciously burnt. Some work of this nature was done two years ago and resulted in a great improvement in the appearance of the driveway.

The Emerald Lake road was kept in excellent repair by the two sectionmen allotted to that district. A portion of this roadway, about the one-mile post, needs to be entirely regraded, and raised at least 2 feet above its present level as in high water it is practically flooded for a considerable distance. In place of constantly repairing the cribwork, it would be more economical to swing the road to the right, rebuild it along the side hill, and thus avoid going along the river flats, which may be washed away at any time by the changing of the channel.

Two new trails were constructed, one giving access from Field, via Ottertail road to lake O'Hara, the other from a point on the Emerald Lake road, near the Natural bridge, up the Amiskwi valley to the north boundary of Yoho park. The new trail to lake O'Hara opens up additional scenic features to the tourist; that up the Amiskwi is more in the nature of a fire protection trail.

A new road has been projected from the Ottertail across Boulder creek to canyon of the Kickinghorse, thence connecting with the Emerald Lake road, affording a pleasant round trip from Field, and revealing another incomparable glimpse of alpine grandeur.

The annual cleaning up of Field townsite was undertaken, and many improvements of a minor nature completed.

GLACIER PARK.

The grandeur of this park, so well known and so often dilated upon, does not need further emphasis at my hands, therefore I will pass onward to the mysterious subterranean passages, known as the Nakimu Caves, which are now within easy reach from the Glacier House by a stage line, to a point on the road not yet completed, for vehicular traffic. Alighting from the stage the lover of the sublime should not be deterred from continuing on foot up the somewhat declivitous and tortuous paths to the caretaker's chalet. Mr. Deutschman, the caretaker, is most solicitous in showing and explaining the mysterious caves, and pointing out the various scenic features to be observed from his model cabin.

From careful exploration surveys of these caves it has been found that by driving a tunnel for about fifteen feet, through the solid rock, the caves can be made more accessible to the public. It is hoped this work will be undertaken in the coming year and thus throw open to the tourist additional attractions to Glacier park.

A very neat log cabin was erected a short distance from the Glacier House, on the Nakium Caves road, for the accommodation of the fire warden during the summer season. Many tourists have commented on the picturesqueness of this cabin, and it is without doubt one of the neatest in any of the Dominion parks.

The usual clearing out of the various trails leading to the Illecillewaet glacier was undertaken and completed as soon as weather conditions would permit. An old trail was opened up from Bear creek to the Beaver river, thence up the Beaver river for a distance of some fifteen miles, mainly for fire-protection purposes.

REVELSTOKE PARK.

As the appropriation granted for the season's work was approximately the same amount as last year, it was carefully expended on the continuation of the auto road from the point where it remained unfinished, approximately about station 200. From this station to 304 it was partly constructed the previous year, therefore our energies were devoted to completing this section and carrying it on as far as funds and season would permit. About the first of June repair work was undertaken to remove obstructions, such as mud and rock slides, cleaning out of side ditches and filling in washouts, caused by the usual spring run-off. A crew of sectionmen took this work in hand, and made a first-class job. The road material is of an excellent quality, and on the wettest days of the season automobiles can go up and down with the greatest ease. There are one or two short spots which will need gravelling, but as a whole the road is in excellent condition in spite of the heavy traffic during the past season. On the last day of August the road was completed to station 430, and the right of way cut and cleared as far as station 542.

A heavy fall of snow in the last week of October brought the season's work to an end.

The pony trail from the city of Revelstoke to the summit of mount Revelstoke was put in order wherever necessary to accommodate the many pedestrians who spend their spare time climbing the mountain to enjoy the ever-changing panorama.

Since the game warden has been patrolling the park and preventing hunting, the partridge and blue grouse have become plentiful. It is a common occurrence to meet coveys of them on the newly constructed auto road. They are very tame and much admired by the tourists taking the auto drive up the mountain as far as the road is open for traffic. When it is completed to the summit it will be a scenic drive second to none in any of the Dominion parks.

BUFFALO PARK.

I have already written a report on Buffalo park, which will be found included in these pages, and therefore will pass on to Elk Island park.

ELK ISLAND PARK.

The usual spring clean-up was undertaken, and the long growth of grass and weeds of the previous year along the outside of the fence line disposed of by burning, as a means of protecting the park from any stray fire that might cross the road allowance. The inner guard, some 30 feet wide, would prevent the fire from getting into the timber within the fenced area, unless the same was fanned by a heavy wind.

The main fence required constant watching, the posts had served their utility and required replacing. A number of posts were cut by alien labour in Jasper park and shipped to Lamont.

Hay lands being limited within the area of the park, additional lands were set apart outside the fenced inclosure; they are adjacent to the south fence and in the Cooking Lake forest reserve. On these lands the quality of hay was excellent, but the ground being rough made it difficult to gather.

All the animals are in fine condition, and it has been observed that the buffalo in this park thrive exceedingly well, their coats being dark and the fur of a fine quality, owing, no doubt, to the succulent herbage growing in the numerous sloughs, which are surrounded by dense poplar and willow bluffs. This is an ideal home for moose, elk and deer. They thrive wonderfully, and it should be borne in mind that it is absolutely necessary if we are to continue raising each year additional stock of the animals above enumerated, the Cooking Lake forest reserve should be added to that of Elk Island park as one park for the preservation of the elk, deer, and moose, and in addition form a reserve for the rapidly increasing herd of buffalo. I have



Road to Pyramid Lake, Jasper Park.

previously made this recommendation. I regret to add that the band of elk which was frequently seen outside the fenced inclosure is gradually being reduced in number.

The road commenced and left incomplete to Sandy Beach owing to the enforced economy, should be completed in the coming season, as it gives access to the east end of the lake and is an ideal residential area and picnic ground, affording excellent bathing facilities. At present it can only be reached by boat or motor launch from the west end or picnic grounds, adjacent to the area reserved for the superintendent's residence.

WATERTON LAKES PARK.

The development work in this, as in the other parks, has been considerably retarded on account of the war, consequently only that absolutely necessary for the convenience of the travelling public in the matter of repairs to roads and bridges was undertaken.

The season was very wet, making the roads outside the park area from the north and east almost impassable.

A contract was let for the erection of a pile trestle bridge across the Waterton river to enable visitors from Macleod, Lethbridge, Cardston, and the surrounding districts to cross the river instead of taking chances of crossing by way of the ford, which is for the best portion of the year impassable for motor cars. This bridge was commenced in October, 1915. Owing to the bad roads and inclemency of the weather it was not opened to traffic until the last week in January of this year. The structure is very substantially built and is 351 feet in length with a clear roadway some 14 feet in width. A new roadway skirting the west shore of the lower lake and joining the Pincher creek road at the Blakiston Brook bridge has been graded from the west approach for about half a mile; on the east some 400 feet, to connect with the old trail; the balance has been surveyed, and when the whole is completed it will be one of the prettiest driveways in the park. Other roads have been projected and surveyed. When they are all constructed the scenic beauties, together with the excellent fishing in Waterton Lakes park, will be accessible to the tourists and the followers of Isaac Walton.

The boulevards were cleared of undergrowth and access given to the waterfront. The streets received attention, and it is hoped that now the bridge is completed people will take up lots, erect summer cottages, and spend their vacation seeing and enjoying the beauties of the scenery now within easy reach.

Wild animals of all species have shown themselves in greater numbers than formerly. Deer are to be seen in and around the townsite; sheep also can be seen on Sofa mountain, across the narrows of the upper lake. Bear are plentiful, so much so, that grizzlies made depredations on the settlers' stock adjacent to the east boundary of the park.

You will note from the reports of the various superintendents that they have given, where possible, the number of visitors to each of the parks. It is gratifying to know that our national parks, with their splendid roads, are yearly attracting an increasing number of people.

P. C. BARNARD-HERVEY.

APPENDIX No. 2.

REPORT OF THE SUPERINTENDENT OF ROCKY MOUNTAINS PARK.

The beginning of the year found the Dominion still engaged in the worldwide war, and in consequence of the obligations assumed in connection with the conflict, appropriations for public services had to be handled in a very conservative manner. The Dominion parks figured in the caution which, generally, governed the passing of estimates. Under the circumstances, however, I think the moneys placed at the disposal of the parks officers here were generous in their amounts and enabled us to do a good deal of valuable and necessary work, besides providing employment for residents of the park during times which otherwise would have been very lean.

The total amount of the year's appropriations for this park was \$144,780, which, being very considerably less than the total of immediately preceding years, and considering that our annual charges for ordinary and unavoidable maintenance are high, did not allow of our undertaking much new work.

The extension and improvement of roads and trails within the park continues to be our chief consideration. The principal items of that work were the regrading, widening, and resurfacing of Cave avenue and the construction of three new pony trails, which latter have opened up some very interesting and desirable country.

With the modification of the regulations governing the running of automobiles in the park, the number of these vehicles coming into the Banff district, brought into instant prominence the unsuitability of Cave avenue as it then existed for this class of traffic, more insistently because the new bath-house is the natural Mecca for all automobile parties coming into town. It was, at that time, a road of the switchback variety, narrow, and of uneven surface, and was quite unsuitable to allow these fast-moving machines to share the roadway with heavy tally-hoes and other vehicles. The work on the road was finished in September, including a considerable yardage of rip-rap side drains, and a raised footpath on the residential side of the road. The highway is one of the very best in the district, and was opened for automobile traffic coincident with its completion.

THE CAVE AND BASIN.

During the year the approaches to the road around the Cave and Basin were graded and rock-macked. A guard-railing of substantial design was built along the edge of the declivity facing the plain on the river's level, ornamental shrub plots were formed, and seats placed for resting places at the various vantage points surrounding and overlooking the building. These improvements were frequently commended by tourists who had known the spot in bygone days.

Another important permanent undertaking was the construction of a new power-house at the Cave and Basin. This work was finally completed and the heat turned on during the month of November. It involved considerable pile driving and a large amount of solid concrete work, but the completed work will suffice for the requirements of the establishment, in this direction, for many years. This plant will also in the near future, I hope, when funds are available, produce the power necessary for the new steam laundry, besides heating the other buildings adjacent to the Cave and Basin, principally the bunk-house across the road, in which the power-house has its location. I hope also to see this bunk-house shingled, painted and generally put into finished shape, at an early date.

BUILDING.

Owing to financial stringency, building in the townsites was practically negligible as compared to former years, and for a like reason there were no extensions of the water and sewer systems, and few new connections. I hope we shall be able to take into consideration at an early date the extension of the sewer system on Cave avenue and the extension of both water and sewer mains on other residential streets in the town, notably Grizzly street, as the provision of these services tends to foster the building spirit among lot holders in Banff.

THE TOURIST TRAFFIC.

The tourist season, in point of actual numbers, was probably as good as ever before in the history of Banff, but there was this peculiarity that the season was not a good one from the point of view of the general caterer to the tourist traffic. During the whole season, from the latter end of May till the middle of October, special and ordinary trains, from both east and west, brought into town, daily, large crowds either going to or coming from the expositions on the Pacific coast. The bulk of this transient trade was handled by the Banff Springs hotel and the Brewster Transport company, and the usual length of stay of these parties was not more than twenty-four hours. For the general trade the month of August was the only good month. During this month, also, both cottages and hotels were well patronized.

Generally speaking, the whole season was excessively wet. There was one outstanding freshet which did a great deal of damage to roads and bridges; but there was some compensation, from our point of view, in the fact that beyond one or two incipient fires along the line of the C. P. R., we had no outbreaks to contend with in the park.

The whole park participated in the usual annual clean-up with very satisfactory results; and it is pleasing to note that a large and increasing number of the residents are taking a gratifying pride in the formation of tastefully laid-out lawns and gardens.

The town of Canmore still suffers from the absence of sewer and water systems; but so long as the financial situation remains in anything like its present state I may not ask that the outlay to institute these be sanctioned.

I have to report that all the park's staff continue to serve the interests of the department loyally, and that the ordinary work of maintenance has been carried out smoothly.

AUTOMOBILES.

The total number of automobiles registered in the park was over 250. There were approximately 250 transient licenses issued; ten owners took out livery licenses, and six private owners took out annual licenses, all three classes together being responsible for considerable new revenue.

During the year the old automobile regulations were relaxed to very considerable extent, practically the only roads in the park remaining closed to them being the Hot Springs road from Banff and the Minnewanka road from Bankhead, inasmuch as points to be reached via the boulevard on the south bank of the Bow, and Beech avenue, may be got at with equal facility by other routes which are open to these machines. I agree, of course, that the present Upper Hot Springs road, in view of its many sharp turns, its inconsiderable width, and the declivitous nature of the south edge, is not suited for mixed motor and horse vehicular traffic, but in view of the importance of this road, with the Upper Hot springs and two hotels as its present objective, I hope that something will be done as soon as possible to put it into a reasonably safe condition for this traffic. Cutting off some of the corners which obstruct a view of approaching vehicles, and the erection of suitable substantial fencing at the edge of the worst of the declivities would, I think, in view of the increasing familiarity of horses here with the automobile, make it feasible to open this road to motors. I understand, further, that a scheme is crystallizing whereby an alternative return route may be provided, having its outlet on Spray avenue at the top of "Government Hill."

I regret I cannot see any immediate prospect of our securing money to put the Lake Minnewanka road, from Bankhead to the lake, into a condition for automobile traffic. Much of this road is of the hogback description, and it would either have to be very considerably widened or an entirely new auto road provided at certain bad places to justify the department taking the risk of opening this route to the lake.

The automobile road is in good condition from the eastern entrance of the park to Castle mountain.

Only two automobile accidents were reported in the park during the year. One car was burnt to scrap on the Bankhead road, and another was put over a declivity on the road some eight miles west of Banff, owing to an admitted error of judgment on the part of the chauffeur.

The new regulations were well and faithfully carried out by motorists, the only two or three cases of infraction being due to ignorance of the locality. After we were able to give out the new road map of the Banff district we had no more cases.

ROADS.

Apart from the automobile road, on the new work, which is dealt with separately, we only did one considerably big job in the way of roadmaking, involving the regrading, widening, and surfacing of Cave avenue, from the Cave and Basin to the Bow river bridge. The work was finished in September, and the road opened to automobile traffic, and I might say the finished job is now one of the very best of our many good roads in the Banff district. There is a driveway 28 feet wide and a footpath has been formed on the residential side of the road. In order that this latter should be properly finished it requires to be surfaced with cinders, which we might be able to do next year at inconsiderable cost, considering the distance. A considerable yardage of rip-rapping has been done in the formation of surface gullies and at culvert entrances, while paths and roads giving access to the various properties on the road have been graded to the new level. The trees that had to be taken down to give the increased width were saved, and will be used for fencing purposes as occasion arises. The remaking of this road gave much-needed employment at a time when it was much required, and also enabled us to keep the rock crusher gang and a number of teamsters employed.



Valley of the Ten Peaks from Moraine Lake Carriage Road.

We had a gang on the road from lake Louise to Moraine lake in an attempt to finish the work so well started in the previous year. Before the rainstorm already alluded to, a good deal of clearing and grading work was done, but the effect of the rainstorm, which lasted for about forty days in this district, was to practically nullify all the work that was done and to provide a lot more. I regret I had to take this gang off before very much could be done to repair the ravages of the storm. In my opinion it is very necessary that we should put on a gang for a whole season on this road, to put it in reasonably good condition. If this were once thoroughly done and the road raked over in the spring, or early summer, to remove the stones coming off the mountains with the soft weather, complaints would cease. The policy of patching is a bad one and the most expensive in the case of a road like this, without being satisfactory, but with the money at our command during the past year we could hardly do anything else.

We also had a gang on the automobile road working westward from Exshaw to a point some miles beyond Canmore. Except for the damage (since repaired) done by

the rainstorm this road was in fine condition from the eastern entrance of the park, right through to Banff, and thence to Castle.

Last year a proposed road from Georgetown to Canmore received some consideration from the department. Including two considerable bridges across the Bow and one of its smaller tributaries, the cost of this road was estimated at something like \$30,000. In view of the fact that the road would have been essentially an industrial one, used mainly in connection with the mines, and that it did not from a parks' point of view open up new territory for tourists, the outlay was not considered justified in the present circumstances.

That part of the old road which forms a loop from the Spray bridge along the embankment at the junction of the Bow and Spray rivers has been put into condition, and is used by teams and rigs, giving the narrow part of the main road at this point over wholly to automobiles.

Some five or six years ago a high cribbed-fill was built where a coulée is crossed near mile 2 on the Spray road. In the month of June this was found to be in a precarious condition, the timbers having become rotten and too small for safety. The rain had soaked the earth-fill behind and pushed the cribbing out of place, the earthwork at the same time dropping down. The old wood was cleared away and new substantial cribbing of improved design substituted, and the fill replaced. This road is now in better shape than for many years, and continues to be a favourite one with tourists.



Tally-ho Party Leaving Banff for one of the Special Drives through Rocky Mountains Park.

The following general road work may be grouped, as it concerns the less serious damage done by the June freshet: A number of fillings around culverts on the auto road were replaced; minor landslides on the road between the Gap and Exshaw and near Canmore were removed; Carrot (or Stoney) Creek bridge was repaired and strengthened; the cribs of the bridge near the five-mile post west of Banff on the automobile road were replaced and the structure put into repair; and two small culverts at the four-mile post where scouring and choking took place, were cleared and put into good condition.

Practically all the principal roads and trails have been marked by signboards for the direction of travellers, at a negligible cost, considering the convenience.

Some repair work was done on the Bankhead road at a point about half a mile west of the town of Bankhead, for the purpose of hardening the surface and eliminating humps.

MILEAGE OF ROADS IN PARK.

	Miles.
Castle to Vermilion..	9
Kananaskis to Banff..	35
Banff to Hot Springs..	3
“ Sundance Canyon..	4
“ Lumber Camp on Spray..	8
Tunnel Moutain Drive..	5
To Lake Minnewanka..	9
Banff to Laggan..	17.54
Laggan to Lake Louise..	3
Lake Louise to Moraine Lake..	9
Bankhead road to Buffalo Paddock..	1
Loop Drive..	7
Canmore Station to Mines..	1.5
Town streets..	6.33
Spray Bridge up River Spray (cut)..	5
Total..	123.37

SIDEWALKS IN BANFF.

We did not have occasion to add to the yardage of sidewalks in the town of Banff during the year, and I append a statement of the length and width of these paths as they now stand:—

GRAVEL Walks—Banff (Town).

Street.	From	To.	Side.	Length.	Width.
				Feet.	Feet.
Muskrat.....	Cariboo.....	Buffalo.....	East.....	710	
Elk.....	Banff Ave.....	Marten.....	East.....	282	
Otter.....	Buffalo.....	Moose.....	East and West.....	3,344	6
Muskrat.....	Buffalo.....	Wolf.....	West.....	1,344	6
Beaver.....	Buffalo.....	Cariboo.....	East and West.....	3,138	6
Buffalo.....	Bear.....	Otter.....	North.....	1,216	6
Bear.....	Buffalo.....	Cariboo.....	East.....	725	4.5
Bear.....	Cariboo.....	Wolf.....	East and West.....	800	4.5
Lynx.....	Cariboo.....	C.P.R. Station.....	East.....	1,800	6
Squirrel.....	Lynx.....	Elk.....	Southeast.....	627	4.5
Banff Avenue.....	Cariboo.....	Buffalo Paddock.....	Northwest.....	1½ miles.	6
Beaver.....	Wolf.....	Moose.....	East.....	752 ft.	
Total.....				4 miles. 708 yards.	

GRAVEL Walks—Banff (Villa).

Avenue.	From	To.	Side.	Length.	Width.
					Feet.
Cave.....	Bow Bridge.....	Cave and Basin.....	East.....	1 mile.	6
Spray.....	Bow Bridge.....	C.P.R. hotel.....	East.....	3,600 ft.	6
Total.....				1 mile. 1,200 yd.	

STATEMENT of Plank Walks.

Avenue or Street.	From	To.	Side.	Length.	Width.
				Feet.	Feet.
Banff Avenue.....	Cariboo.....	Wolf.....	East.....	600	6.0
Cariboo.....	Banff Avenue.....	Beaver.....	South.....	260	4.5
Banff Avenue.....	Buffalo.....	Bow Bridge.....	East and West.....	700	4.5
Wolf.....	Banff Avenue.....	Bear.....	South.....	259	4.5
Total.....				406 yards.	

STATEMENT of Cement Walks.

Avenue or Street.	From	To.	Side.	Length.	Width.
				Feet.	Feet.
Banff Avenue.....	Buffalo.....	Wolf.....	East and West.....	1,425	12
Total.....				475 yards.	

BRIDGES.

Early in the year it was necessary to re-floor the bridge over the Bow river at Canmore, which carries a great deal of heavy traffic annually, and which is the connecting link over the river between the mining sections and the railway. The smaller of the two bridges at Canmore was similarly treated owing to the floor having become worn to a dangerous thinness in so many places that patching work would have been false economy.

Following the removal last year of the Bow river bridge at Banff to a temporary site 75 feet east of the old site, the Department of Public Works did a considerable amount of drilling work on the old site for the purpose of ascertaining the nature of the probable foundations for the new structure. It would appear, from conversations with the engineer in charge, that while solid rock was not encountered to a depth of 75 feet, the intervening formations were such that there would be no difficulty in getting suitable foundations. The present bridge is of very limited width, and autos and rigs cannot safely pass. I shall be glad, therefore, when the work on the new bridge proceeds as, apart from being a convenience in the handling of cross-river traffic, the erection of the bridge will mean the provision of much needed employment for our resident population.

In the first week in July, following a period of almost continuous soft rain, a tremendous storm occurred all over the Rocky mountains, and almost unprecedented flooding took place. Rivers contained between high banks ordinarily giving a wide margin of safety, flooded many miles of surrounding areas, carrying off timber, lightly anchored houses, and, in one or two cases, further east, destroying life. Small streams became raging torrents, almost over night, causing bridges previously amply sufficient for their purposes, to become submerged and the approaches to be washed out.

Being so far in the mountains, and thus closer to the rivers' sources, the full force of the flood was not felt in the Rocky Mountain park as in the cities and towns on the prairies, but there was, nevertheless, considerable damage done to the bridges



Marvel Falls, Bryant Creek Trail, Rocky Mountains Park.

and culverts. For a period of about forty-eight hours considerable anxiety as to the stability of the Bow River bridge at Banff, in its new position, was felt, owing to the level of the water having risen practically to the top of the piers. Very little débris, however, came down the river, and the bridge stood the test well.

At the bridge over the Cascade river at Anthracite, however, we were not so fortunate. In the ordinary course this somewhat erratic stream may be crossed with the ordinary angling waders, in the neighbourhood of this bridge. This crossing consists of one-span steel bridge, 90 feet long, on the west channel, and three 24-foot wooden spans on the east side. The main channel formerly passed under the steel bridge, but this has been silted up and the main body of water now flows under the three approach spans, and scouring took place under the first bent from the east, and also behind the abutment. On the 5th July, when the water was at its highest, drift accumulated so quickly that we had the greatest difficulty in keeping the bents clear, as large portions became entangled between the posts, including a portion of a footbridge from Bankhead, which caught up in the first bent forming a barrier so that the water scoured the channel underneath to the extent that this bent dropped about nine inches. A temporary crossing was made over this and we proceeded to build wings and backfill with rocks as there was danger of the earth approach falling in and carrying the temporary bridge with it. Strong cribbing work was done at the east approach, and traffic was not long delayed.

The same flood necessitated the closing up of the old bridge at Anthracite, commonly known as the "Duncan bridge," and owing to the financial situation it was found impossible to undertake the erection of a new bridge, although the matter has not been lost sight of against the time when conditions are better.

Some damage was also done to the approaches to other bridges and around culverts, notably on the automobile road, but our own staff was able to do the necessary repair work to restore passageway without any serious loss of time.

It is proposed to repaint and do some overhauling work at the steel bridge over the Bow at Castle during the coming year. The general work here has reference to the completion and securing of wheel-guards and the erection of either a lattice work fence or a handrail, while the approaches will have to be regraded. The débris that had accumulated between the old coffer-dam, used in the course of construction, and the piers, was cleared away in the month of April.

The centre pier for a new bridge over the Spray river 5 miles up the stream from the present Spray bridge at the junction of this stream with the river Bow, was put in under the direction of the resident engineer during the month of November. Fuller reference to the bridge, which was included in the scheme of work outlined for the aliens during the winter, is made in another part of this report, but it might be noted that while the bridge is a very substantial one, apart from the cost of labour, it was cheapened by the fact that the necessary lumber was cut from the right of way of the new road with which it connects.

TRAILS.

Three new trails were constructed during the year besides giving the usual attention to keeping the existing trails clear of fallen timber. The three new trails are: (1) From Spray bridge up mount Rundle to timber-line—distance, 3 miles. (2) Over Stoney Squaw mountain and Forty-mile creek up west shoulder of Cascade mountain to timber-line—distance, 6 miles. (3) From Brewster creek to Bryant creek—distance, 17 miles.

These twenty-six miles of new trails cost the branch approximately \$2,600, and have opened up some interesting and desirable country to pony and pedestrian travel.

We also did some special work on the Ptarmigan Lake trail, prior to the formation of the Alpine Club's annual camp at this point.

TOTAL MILEAGE OF TRAILS IN PARK.

	Miles.
Spray to Mount Assiniboine..	18
Banff to Spray Lakes and Eau Clair wagon road..	28
Bow Summit..	30
Banff to Fatigue Creek..	19
Pipestone Trail..	28
Cascade (Sawback to Bankhead)..	28
Mount Edith trail to Sawback Lake..	24
Lake Minnewanka trail..	14
Banff to Simpson Summit..	14
Canmore to Whiteman's Pass and Spray Lake trail..	4
Tunnel Mountain trail..	1½
Sulphur Mountain trail..	3½
Carrot Creek and Lake Minnewanka..	12
Red Earth Creek and Simpson Summit, via Mount Ball..	17
Little Pipestone to head of Red Deer river..	4½
Castle-Vermilion road to Twin Lakes..	4½
Boom Creek bridge to Boom Lake..	5
Spray bridge to timber line on Mt. Rundle..	3
Banff to timber line on Cascade..	6
Brewster Creek to Bryant Creek..	17
Up Broom Creek (by our own warden)..	2½
Total..	283½

TRAILS IN THE PARK.

The following is a list of the trails in the park, compiled by the chief fire and game warden, with notes on the principal points of interest along their routes. (The distances given are only approximate, but do not in any case overlap.)

1. *Bow lake and pass*.—Thirty-three miles from lake Louise.

Points of interest: Bow valley, Hector lake or lower Bow valley, lakes Margaret and Turquoise, upper Bow lake, Bow glacier, Crowfoot glacier, Balfour glacier, Waputik icefields, mounts Gordon, Balfour, Bow, Pulpit, Portal, Observation, Dolomite, Peyto lake and glacier, Observation point, with wonderful view north.

Trail continues down Bear creek to the Saskatchewan, and thence in all directions.

2. *Molar pass*.—Twenty miles. From Bow trail to Pipestone trail. Mosquito creek, High pass, Molar creek, mount Hector and mount Molar.

3. *Dolomite pass*.—Nine miles from Bow trail to boundary of park. Trail continues down Doone creek to Siffleur. Dolomite pass, altitude 7,905 feet. Lakes Katherine and Helen.

4. *Pipestone Pass trail*.—Twenty-eight miles to summit. Altitude, 8,364 feet. Mounts Richardson, Hector, Molar, Cataract, many unnamed lakes, falls, caves, etc.; trail continues either down the Siffleur or over Clearwater pass.

5. *Little Pipestone trail*.—This can be followed either of three ways: To Red Deer summit, to Baker lake or to Ptarmigan lake, all of which are delightfully wild, each about 9 miles distant. Fourteen lakes can be seen from one point on this trail.

6. *Ptarmigan Lake trail*.—Twelve miles. Ptarmigan lakes, Baker lake, Carroll creek, mounts Fossil, Oyster, Ptarmigan, Pika, Redoubt; grand views to the south of the lake Louise mountains and Ten Peaks. Altitude of Ptarmigan lakes, 7,561 feet.

7. *Red Deer Summit and Douglas lake*.—Nine miles. North and south towers of mount Douglas, mount Drummond, Summit lakes, Douglas lake, Silver Serpent lake, Moonstone falls, Natural Bridge. Trail continues down the Red Deer.

8. *Baker Creek trip*.—Eleven miles. Baker Creek valley, mount Redoubt, Heart lake, and others.

9. *Johnson creek*.—Twelve miles. Canyon lakes, Castle mountain, Bonnet peak.
10. *From Baker to Johnson Creek*.—Eight miles. Summit lakes, etc.
11. *Hillsdale trail*.—Five miles. A short cut from Johnson creek to Hillsdale or Massive. Fine views up and about Bow valley.
12. *Mystic Lake trail*.—Eight miles. Leading from Johnson creek east, Sawback range, Mystic lakes, Forty-mile creek.
13. *Mount Edith and Sawback lakes*.—Twenty-one miles. Vermilion lakes, mount Edith pass, mounts Edith, Louise, Norquay, Sawback lakes, and creek to Cascade river.
14. *Flint and Johnson creeks*.—Ten miles. Flint park and Block mountain.
15. *Bijou Pass*.—Fifteen miles. Harrison lake and Panther falls.
16. *Cascade river*.—Twenty-three miles from Banff. Animal pasture, Bankhead coal mines, Stewart canyon, Cascade mountain, Stony creek.
17. *Cut Head and Wigmore*.—Twelve miles. Lakes, coal seams and Panther falls.
18. *Snow creek*.—Fourteen miles. Panther falls, Bare mountains, White creek, White mountain and Prow mountain.
19. *Panther river*.—Eighteen miles. Sulphur springs, coal seams, Panther mountain, White mountain.
20. *South branch of the Panther to Cascade*.—Twenty miles. Great game and fish country.
21. *Stony creek and Ghost river to Gap*.—Eighteen miles. Mount Aylmer, Castle Rock, Devil's Head, point where river disappears.
22. *Aylmer pass, lake Minnewanka and Ghost river*.—Thirty miles. Aylmer canyon and mount Alma, Costigan, Minnewanka, Inglismaldie, Girouard, Peechee, Devil's Gap, Saddle peak.
23. *Carrot creek to lake Minnewanka and South fork of Ghost river*.—Twenty-five miles. Peechee, Fairholme, Saddle and End mountains.
24. *Great Divide and Bath creek and lake O'Hara*.—Twenty miles. Daly and Niles glaciers, mounts Hector, Stephen, Cathedral, Field, Odary, Lefroy, Biddle, Wiwaxy peaks, Victoria, Park, Schaffer, Opabin; lakes Summit, Sink, Wapta, O'Hara, Oesa, McArthur and Grouse. Trail continues down McArthur creek.
25. *Lake Louise to Ross lake*.—Eight miles. Mount Niblock and Great Divide.
26. *Banff to Laggan, north side*.—Thirty-eight miles. Mounts Edith, Hole-in-the-wall, Bourgeau, Pilot, Massive, Castle, Ten Peaks, Temple, Hector and others.
27. *Upper lakes, Mount St. Piran and Little Beehive*.—Six miles. Lakes in the Clouds, Louise, Mirror and Agnes.
28. *Grandview trail*.—Two miles. Birds-eye view of Victoria glacier and lake Louise.
29. *Lake Louise and Victoria*.—Four miles.
30. *Saddle peak and Sheol valley*.—Six miles. Fairview, Saddle and Temple.
31. *Paradise valley*.—Six miles. Mount Aberdeen, Horseshoe glacier, the Mitre, Pinnacle peak, Wastach pass, Eiffel peak, and mount Temple.

32. *Giant Step falls*.—One mile from main Paradise Valley trail.
33. *Lake Annette*.—One mile from main Paradise Valley trail.
34. *Sentinel pass* (altitude 8,556 feet).—Seven miles. Between mounts Temple and Pinnacle. Larch valley, Ten Peaks and Moraine lakes.
35. *Moraine Lake trail*.—Nine miles. On base of Fairview and Temple. Carriage road. Ten Peaks, Bident, Quadra.
36. *Consolation lakes*.—One and one-half miles. Lake Bident and mounts Bident and Quadra.
37. *Wenkchemna valley and lakes*.—Five miles. Moraine lake, Wenkchemna lake and glacier. Ten Peaks, etc.
38. *Wenkchemna pass*.—Seven miles. High trail on Temple, Pinnacle and Eiffel. Prospector's valley.
39. *Vermilion pass and Boom lake*.—Twelve miles. Summit lakes, Boom mountain and lakes, mounts Storm, Whymper and Bident.
40. *Twin lakes*.—Five miles. Copper and Storm mountains.
41. *Copper mountain*.—Four miles. Copper mine.
42. *Red Earth creek and Shadow lake*.—Ten miles. Mounts Copper, Pilot, Ball and Brett, Shadow lake and many others. Canyon.
43. *Castle mountain to Banff* (south side).—Twenty miles. Mounts Copper, Pilot, Brett, Bourgeau, Healy creek, Sheep cave, Cave and Basin.
44. *Healy creek and Summit, high trail*.—Sixteen miles. Mount Bourgeau, Window-of-the-Gods (Hole right through the mountain). Simpson summit and lakes and view of mount Assiniboine.
45. *Healy creek, Simpson pass and head of Red Earth creek*.—Sixteen miles. Several lakes.
46. *Brewster creek*.—Fourteen miles. Fatigue mountains, Brewster glacier.
47. *Douglas creek*.—Seven miles. Summit lakes, etc.
48. *Sundance pass and around Sulphur mountain*.—Twenty miles. Sundance canyon, Eau Claire lumber camps, mount Rundle, Spray canyon.
49. *Hot Springs and Observatory*.—Six miles. Middle Springs, Kidney Springs, Government swimming baths at Hot Springs, Sulphur mountain and Observatory. Carriage road to Hot Springs, balance cinder path.
50. *Around Tunnel mountain*.—Four miles. Bow falls, Hoodoos, etc. Carriage road.
51. *Spray lakes, main trail*.—Thirty miles. Mount Rundle, Three Sisters, Spray lakes. Carriage road 6 miles.
52. *Spray River falls, Bryant creek*.—Sixteen miles. Spray falls, Bryant creek, mount Assiniboine.
53. *Main Spray river*.—Twelve miles. Goat range, Eau Claire camps.
54. *East branch of Spray to Mud lakes*.—Ten miles. Mud lakes and Hogarth lakes, southern boundary of park.

55. *From Head of Kananaskis to Spray.*—Ten miles. Mud lakes and Hogarth lakes, southern boundary of park.

55. *From Head of Kananaskis to Spray.*—Ten miles. Chain of four lakes, glacier, and fine peaks. Route along Continental Divide.

56. *Spray river, Palliser branch.*—Six miles. Cariboo lakes, Canyon, etc.

57. *South branch of Spray to Whiteman's pass.*—Six miles.

58. *Canmore to Spray trail.*—Four miles. Sulphur Springs, Whiteman's pass, Rundle, Three Sisters, Hoodoos.

59. *Kananaskis river and lakes.*—Thirty miles. Mount McDougall, Kananaskis range, Fishers range and lakes.

60. *Gap trail to Kananaskis valley.*—Ten miles. Pigeon mountain, Wind mountain.

61. *Up Boom creek.*—Thirty-one and one-half miles. Fishing and spawning grounds.

62. *Brewster creek to Bryant creek.*—Twenty-five miles. Alpine scenery. Trail crosses summit at 7,500 feet. Mount Cory is highest peak on trail.

63. *Up Cascade mountain.*—Six miles. Mountain and canyon scenery. Route can be travelled by pony to within easy distance of summit of mountain.

64. *Up Mount Rundle.*—Three miles. Alpine scenery.

N.B.—All mileage, except branch trails, starts from Banff or Lake Louise.

WATER AND SEWER SYSTEMS.

For a town of its size the water and sewer systems of Banff are described as unexcelled on the continent. Both systems, while being capable of considerable extension in the way of increased area of service, are in perfect condition and receive the unremitting attention of the permanent staff of the park. No extension of either system has been possible during the past year owing to the financial situation, but we shall be able to undertake this, where necessary, when the tension ceases.

The result of the periodical analysis of the water supply continues to give gratifying results both as to purity and clarity, although in the early part of the winter some trouble was experienced owing to frazil ice forming at the intake.

Some repair work was done at the intake during the year, including the repairing of the dam and the provision of new copper screens in place of those which had become incapable of dealing with leaves and other foreign matter which gets into the water in the autumn.



Lake Hector, from Bow Trail.



Lake Louise.

Photo by Mrs. Jos. H. Willets.

WATER MAINS—Banff (Town).

Street.	Mains.	Hydrants	Valves.
	Feet.	No.	No.
Grizzly.....	1,600	2	4
Banff avenue.....	6,495	14	6
Beaver.....	3,120	7	4
Muskrat.....	3,580	9	4
Otter.....	2,365	3	6
Bear.....	1,475	4	1
Buffalo.....	2,790	3	4
Cariboo.....	960	0	6
Lynx.....	1,300	3	5
Squirrel.....	2,210	6	
Elk.....	325	1	6
Marten.....	2,709	5	
Wolf.....	2,245	6	
	1,242		
Totals.....	118,096	64	61

WATER MAINS—Banff (Villa).

Avenue.	Mains.	Hydrants.	Valves.
	Feet.	No.	No.
Cave.....	5,340	8	5
Spray.....	2,925	7	7
Totals.....	8,265	15	12

SEWERS—Banff (Town).

Street.	Mains.	Manholes.
	Feet.	No.
From Bear Cage to River.....	280	5
Lane between Grizzly and Otter.....	1,295	6
Cougar.....	1,513	
Banff Avenue.....	4,159	14
Beaver.....	2,917	12
Muskrat.....	3,865	14
Otter.....	2,310	8
Bear.....	1,458	5
Buffalo.....	1,400	
Cariboo.....	1,785	3
Lynx.....	1,233	3
Squirrel.....	2,191	7
Marten.....	2,164	9
Wolf.....	375	
Totals.....	26,945	86

SEWERS—Banff (Villa).

Avenue.	Mains.	Manholes.
Sewer drain from marsh land to Bow River.....	4,642	14
River—from point opposite Sanitarium hotel to manhole where trunk sewer crossed Bow river.....	500	1
Trunk sewer (concrete) from Bow river opposite Muskrat street to outlet above falls	1,450	6
Totals.....	5,592	21

During the year we put in seventeen water connections and eleven sewer connections. This comprises the period from April 1 to October 1, by which time the weather conditions were becoming too rigorous for this class of work.

CONSTRUCTION WORK AT CAVE AND BASIN.

During the year a considerable amount of construction work was done in connection with the Cave and Basin bathing establishment. The preliminary work of pile driving to secure a foundation for the new power-house was done last year. The building has now been constructed; the connections have been made and the heat has been turned on. The boilers, besides heating the new bath-house, also supply heat to the old bunkhouse which was in use by the military authorities during the winter, and will, when the plant is installed and ready for operation, supply the power necessary for the new steam laundry.

The road around the bath-house has been regraded and rock-macked. A branch road has been graded down to the bunkhouse, the precipitous edge of the road protected by a substantial rustic fence, and retaining walls built of sulphur rock. The road is in excellent condition, and the improvements, taken as a whole, are a fit setting for the handsome building at this point.

The slides at the pool have been covered with smooth oil-cloth, and a stream of water at 90 degrees, turned on to them. Two protective grills have been erected at corners which gave opportunity for persons to clamber through onto the walls, where there was chance of accident.

A small cold sulphur water creek above the bath-house was diverted from the pool supply with a view to improving the temperature; the belvederes, and some other apartments in the building were repainted on account of scaling, and a new keyboard provided. Eight jardinières have been placed at different parts of the building for ornamental purposes.

The action of the water and more or less constant use revealed several defects in the doors, both as regards material and hanging, and the matter is now in the hands of the commissioner's staff for adjustment.

The following other general work was undertaken: water attachments were made to the lavatories; cold water drinking fountains were installed; the letters and numbers for the dressing rooms were attached; a door was erected to prevent passage between the Basin and the old cool pool, which latter was kept filled for the use of the internes during the winter; the old boiler-house was removed; a number of rustic benches were made and placed on the various promenades and the upper belvederes; one hundred and forty-four stools were built by our own carpenters for the dressing rooms, and the rough ground behind the upper terrace was cleaned up, terraced, and seeded.

BUILDING PERMITS.

In every way—money, cost of materials, and weather—the year was an inauspicious one for building. With the exception of the new power-house and the winter internment camp, both at the Cave and Basin, the department undertook no new building operations of any moment. There were fewer than twenty new building permits issued during the year, the total sum concerned being less than \$10,500. When the financial situation improves, however, the indications are that there will be a recrudescence of the building trade, so far as private interests are concerned, in the different townsites throughout the park.

ELECTRIC LIGHTING OF BANFF.

The scheme for a generous extension of the street lighting system of the town of Banff, promulgated last year, was postponed for the same reason which compelled the postponement of so many other of our plans. There is, nevertheless, great need for this extension, and if we could place lights at the present dark street intersections and place more lights at the east end of Banff avenue, we would be able to get along without the larger scheme for a time.

Engineers were engaged during the year in the examination of the hydro-electric possibilities of Carrot creek, the Bow falls, the Spray river, and Forty-mile creek, and reports will reach the commissioner in due course. The time is ripe for the installation of our electric plant, and I would urge that it receive the attention of the department as early as possible.

TELEPHONE SYSTEM.

I had expected, before it became necessary to economize in every possible direction, that the new telephone exchange would have been installed in the new quarters in the fire-hall building, and that this would have given us a little more room in the present office for the staff in connection with museum and timber work. During the year, however, we were able to overcome the line congestion to a considerable extent by using parts of the new apparatus. In this way we provided over twenty new lines, which will be sufficient for new applications for some time.

The system is in connection with the Alberta Government's long-distance lines.

The following are details of the lines in use:—

To Bankhead.. . . .	5 miles connecting	12 phones.
To Lake Minnewanka.. . . .	8 " "	2 "
To the Observatory.. . . .	4 " "	1 "
To Upper Hot Springs.. . . .	3 " "	4 "
To Cave and Basin.. . . .	1 " "	4 "

There are forty-eight business phones and twenty-nine private phones on the switchboard.

BANFF FIRE BRIGADE.

The apparatus, organization, discipline, and personnel of the Banff fire brigade continue to be of a very high standard. The organization is entirely voluntary, the only direct salary expense to the department being the monthly wage of a caretaker, who is on duty every day, to look after the cleaning and heating of the building and the care of the apparatus, and who is also an active member of the brigade. Two or three other members of the brigade sleep at the fire-hall and are always on hand for night calls. The members of the organization all live within close call of the building, and there is always a quick response to alarms.

A team of horses is also stabled at the building.



Mt. Temple from Moraine Lake Road, Rocky Mountains Park.

The chemical engine which we had on loan from the city of Calgary was returned in the month of May as being unsatisfactory. We hope to get it replaced by and by with a new machine to take care of incipient fires where it would be effective without the use of water from the main hose, and the consequent inevitable extra damage.

The hall itself is of a very comfortable description, the upper floor being devoted to bed-rooms and a large club-room, which is in constant use for the purpose of general organization. It is fitted with a handsome pool table and other recreational facilities. The lower floor is devoted to storing and caring for the apparatus.

Increased facilities are required for drying the hose after use, and this, together with requests for increased apparatus, is now under consideration by the commissioner. During the year, 500 feet additional hose of first-class quality was supplied.

There were two fires of considerable importance during the year. The first in the early morning of September 20, by which the Alpine block, owned by Hon. R. G. Brett, Lieutenant-Governor of Alberta, became a total loss; the second on the night of February 28, when the curio store and workshop of N. K. Luxton (Sign of the Goat Curio Co.) was completely destroyed. There were eight other small fires during the year, five of which were caused by overheated stovepipes. Two of these might have assumed considerable importance but for the assistance of neighbours, much valuable time being lost in giving notice of the fire, in one case the occupant of the house having to run half a mile on a snowy road to give the alarm.

MINING IN THE PARK.

While the mining claims in the park are entered with and handled by the Dominion Lands and Crown Timber Branch of the Department of the Interior, through the Calgary office, I am kept advised of the claims granted and have to report that about twenty such applications have been granted during the year. These refer principally to the location near Eldon station, where copper and gold are reported to have been found in paying quantities, and in connection with which at least two companies have been floated, at limited capitalization, for development work. These companies are named the Alberta Copper Company and the Calgary Copper Company.

A phosphate deposit was reported to have been discovered in the park in the course of the year, which, in view of its possible importance from an agricultural point of view, is being inquired into by government agents, and no claims are meantime being considered. It has not been finally decided as to the approximate yield or the area covered by the deposit.

RAILWAY UP CASCADE MOUNTAIN.

During the year a syndicate, headed by ex-Mayor Deacon of Winnipeg, received conditional authority from the department to build a railway up the south face of Cascade mountain, and some preliminary survey work was done in connection with the scheme. Mr. Harold S. Johnston, C.E., of Banff, led a party of engineers to the summit in the spring, and a full and detailed report is presently under consideration by the syndicate in question.

BOARDS OF TRADE.

There are two boards of trade in the park—at Banff and at Canmore—which are valuable bodies, inasmuch as they periodically discuss questions of importance to the park generally and their own districts particularly. I am indebted from time to time for valuable suggestions from both bodies, and their co-operation in the matter of the annual clean-up day was of real and valued assistance to the officers who had the general direction of the work.

In the course of one of the commissioner's visits to the West last year an influential deputation of the Banff Board of Trade convened with him in my office and discussed an agendum which embraced and helped to definitely clear up many phases of the park government.

NUISANCES AND SANITATION.

A method which we have found most successful in disposing of *débris*, which inevitably collects on premises during the winter and early spring, has been in vogue for the past two years. We hold throughout the park what is known as an annual clean-up day, usually in the month of May. Our spring cleaning this year was very thorough all over the park, many hundred loads of rubbish being either burned or dumped at suitable out-of-the-way places. Apart from the consequent diminution of the fly nuisance, this has caused in the various townsites a satisfactory increase of laudable endeavour to beautify and improve the value of lots by forming lawns, flower, and vegetable gardens. This tendency is most strongly in evidence in Banff, and can be extended to the other towns with profit to the lot holders.

A number of minor nuisances such as depredatory bears, and cattle and horses running at large outside assigned bounds, were dealt with, the former by means of the warden's rifles and the latter through the court.

A considerable number of dogs of uncertain and mixed breeds were despatched by the license inspector in the summer, with the consent of the reputed owners of these animals who did not care to pay the license fee.

ACCIDENTS

Beyond one case, where a yak in the buffalo inclosure butted the caretaker and inflicted some minor although painful injuries, there were no accidents to the employees of the department during the year.

One visitor to the park, however, met his death in tragic fashion. While the water was fairly high he rowed down below the Bow river bridge and, unheeding a number of warnings, proceeded until the boat was caught in the rapids above the falls, where he could do nothing to gain the bank and prevent his boat and himself being swept over the cataract. With the exception of a few of the furnishings of the boat nothing remained to indicate that an accident of the sort had taken place, and the body, at the date of writing, has not been found.

CEMETERIES.

Two cemeteries are administered from this office, Banff and Bankhead. The Banff cemetery is in good order in every respect. A good deal of work has been done during the past year, mainly in the way of keeping the place tidy, in a resurvey and in the identification and fuller registration of lots.

The Bankhead cemetery was located and put into commission during the summer in so far as two of the surveyed sections are concerned, and that portion of the ground which it is proposed to use first has been fenced and a roadway graded up the rising ground from the Lake Minnewanka road. The burials in the Banff cemetery have been about a normal number.

CANMORE TOWNSITE.

Besides the repairs made to bridges at this point, which are referred to elsewhere, a pavilion was erected at the recreation grounds for the use of the various athletic organizations using the playground. The building, which was constructed by local

labour, is not of ornate design but is eminently useful in arrangement and is very much appreciated by the various clubs in the neighbourhood.

Some reference is also made to the question of a water supply in another part of this report.

During the year Mr. W. H. Evans was appointed the department's agent at this place, with excellent results in regard to the expedition of the department's business.

The building trade here, during the year, was by no means flourishing. A few buildings were completed and leases issued, but there were few applications for new lots.

ICE CUT.

The ice cut by the Brewster Trading Company this year amounts approximately to 11,000 tons (392 cars).

FIRE AND GAME WARDENS' DEPARTMENT.

The work of this department proceeded smoothly and efficiently during the year—protection of game, guarding against fire, cabin construction and trail clearing and building, all being thoroughly attended to, besides considerable extension taking place in the telephone system.

A trail, two and one-half miles in length, was constructed up Boom creek by one of our wardens.

FIRES.

We had no forest fires of any consequence owing to the extremely wet season, those which were reported occurring along the line of the Canadian Pacific railway and resulting in practically no damage. The early part of the season was so wet that the railway company was granted relief from fire patrol during April and ten days in May with the understanding that the patrol was to be provided on twenty-four hours' notice being given, but an application for further relief was refused. In all, I had reports of six of these incipient fires starting near the line of railway, all but one having started from railway sources. The exception was caused through carelessness by tramps. The worst of the fires damaged one and a half acres of grass. There were no fires in the park other than those mentioned, during the year.

Fire Precautions.

We purchased, during the year, a motor launch from Mr. William Mather, of Banff, for fire fighting and general purposes on lake Minnewanka.

A stock of strikingly effective metal notices, containing a joint warning and appeal in regard to the protection and extinction of fires, was received during the year. At the beginning of the season 600 of the 1,500 received were conspicuously posted all over the park with success, notwithstanding that the season was too wet to thoroughly judge the effect of these notices. They may now be met with on every road and trail in the park and there can be no excuse for carelessness through ignorance, in handling camp fires and smoking accessories. The two picture shows were supplied each with a set of three coloured slides containing equally effective warnings in the same connection, and these are shown on the curtain at every session during the fire season, free of any charge to the department. There was also distributed a large number of brass plates containing a concise warning regarding carelessness by driving and riding parties. This policy of driving home a warning in every possible way cannot fail

to be productive of good results. Some thousands of artistically designed wall cards have been distributed and are hung in public places and in the rooms of the various hotels, while a movement is under consideration for the educating of the school children in the same direction.

A complete fire-fighting outfit, consisting of a Ford automobile with a suitable box body, a marine gas engine connected to a rotary pump capable of delivering a 40-foot stream through 800 to 1,000 feet of 1½-inch hose, and a portable gasoline engine, together with the necessary accessories, were supplied and gave excellent results at



Fire Auto Loaded with Two Pumping Units.

the tests made. This outfit should be of great practical value on routes over which the car can travel, as water is to be got within reasonable distance of all roadsides. I may also state that the car, apart from its value in connection with the pumping apparatus, has been of very considerable use in connection with the warden's branch of the work of the park.

A system of field telephones has been given a good start, and some further work was done on the heavier line started last year. A full report on the complete system can, however, very well be left till my next report, when we shall be able to go into it in detail, with possibly suggestions as to its further extension.

A very valuable look-out station in the Banff district, during the fire season, has been found to exist at the Observatory building on the summit of Sulphur mountain, where in dry seasons we have a man on duty all the time. During the year we put the telephone line between Banff and the Observatory into thorough order for this service, as well as for the use of Mr. Sanson on his periodical trips to the summit on meteorological work.

CABINS.

Six new wardens' cabins were built by the wardens themselves during the year, two of which are for winter use; and one cabin is in course of construction at Canmore and will be completed for occupation during the next year. Those completed are situated at Massive, Bankhead, head of Red Earth creek, Simpson summit, and head of Bryant creek. The policy of the department is to extend the system of cabins yearly until the whole area of the park is systematically provided for, and as the wardens do this important work themselves to a more or less standardized plan and specification, and as the equipment is also standardized, the cost of constructing and equipping these is minimized.

GAME.

All kinds of large and small game are very numerous in their different habitats within the park, and also in the preserve outside its borders, which our wardens also patrol. The vast number of deer in and close to the townsites is somewhat of a nuisance during the early fall owing to the damage they do to gardens, as no ordinary low fence will keep them on the outside. They are, however, a great source of interest to visitors, and the latter recommendation is probably a sufficiently general offset to the drawback referred to. In the mount Edith direction and in other parts of the park, large flocks of Rocky Mountain sheep may be seen daily, and they are so tame that many fine pictures have been taken at close range. The black bear is also very common, and not a little destructive, especially close to outlying houses in the Banff townsite. We had to order the destruction of one or two of these animals owing to successful raids which they made on outdoor larders, and one female killed for this reason near a house on the automobile road provided us with a pair of small cubs for our zoological collection at Banff. Goat and feathered game are also reported in large numbers in various localities.

VIOLATIONS OF GAME REGULATIONS.

There were two important prosecutions under the regulations governing the protection of game, both of which resulted in convictions and the imposition of penalties. The first which took place in September, concerned the killing of two goats and involved two New York sportsmen and three guides. The heads were discovered by one of our wardens in a cache about ten miles on the Alberta side of the interprovincial boundary, and notwithstanding the assertion that the heads were got in British Columbia (the British Columbia goat season starts September the 1st.) and brought into the cache, the magistrate convicted all accused and imposed fines of \$25 per head on each, making a total payment into court of \$250, besides the expenses of the court.

The second charged offence took place in October and involved a Banff sportsman and a local guide. The case was a peculiar one in that the parties were out on the trail with a "camping and hunting license" issued by an employee of the Forestry Branch in the Calgary office, but did not take the route set forth in the register. They were followed, however, and were duly convicted, a fine of \$50 each being imposed, together with the confiscation of the whole outfit, which included rifles, saddles, the usual camping paraphernalia, two sheep heads and ten head of horses. Full reports of these cases were duly sent to the commissioner at the time the cases were disposed of.

FISHERY REGULATIONS.

The fishery inspector reported only one case of violation of the fishing regulations during the year. Three miners from Bankhead were convicted and fined \$25 each and costs for using night lines in lake Minnewanka.

The flagrant use of dynamite, so common years ago, has, owing to strict guardian service, been entirely eliminated during the year.

With the hatchery at Banff introducing new species of game fish and turning into the lakes and streams in the park, many thousands of our best mountain game fish, a few years should see these waters well stocked, and a corresponding increase in the angling sport.

The spawning operations at Boom lake during May and June yielded about 160,000 cut-throat spawn, which developed, in the hatchery, into fine young fry, and which were turned into angling waters in October.

As a number of the mountain lakes are without fish owing to waterfalls, which are too high for fish to get up, every endeavour will be made, it is stated, to stock these waters.



Royal Party on Canoe Trip down Bow River, Banff.

H. R. H. the Duke of Connaught is in the leading canoe, H. R. H. the Duchess of Connaught is in the first canoe moored to the bank, H. R. H. Princess Patricia is in the canoe farthest away.

A number of inquiries from outside points regarding seasons, regulations, and other allied questions were answered and pamphlets and guides sent out.

The superintendent of the fish hatchery reports that during the year 570,000 salmon trout and 90,000 Atlantic salmon trout were put into lake Minnewanka; 120,000 cut-throat trout, hatched at this establishment, were put into the various lakes and streams during the year.

The visitors to the fish hatchery were as follows:—May, 66; June, 372; July, 485; August, 557; September, 751; October, 107; November to March, 705. Total, 2,367.

BUFFALO PARK AND ZOO.

We had as usual a few losses both at the Buffalo Park and the Zoo, but, generally speaking, the health of the animals in both inclosures continued to be excellent.

In connection with the zoo, I have to record special thanks to Mr. Charles B. Horsbrugh, Red Deer, and formerly of Alix, Alta., for many free contributions he has made to our collection during the last year.

We have the following animals in the Buffalo inclosure at the time of writing: Buffalo, 13; moose, 8; elk, 28; mule deer, 10; white-tail deer, 2; Persian sheep, 6; Angora goats, 18; Rocky Mountain sheep, 17; Rocky Mountain goat, 3; four-horned sheep, 14; yak, 14.

In the zoo the collection consists of the following: Orange squirrels, 1; marmots, 4; mountain gophers, 4; black bears, 5; cinnamon bears, 1; grizzly bears, 2; polar bears, 1; mountain lions, 1; timber wolves, 3; coyotes, 5; badgers, 3; porcupines, 2; lynx, 3; red foxes, 6; white gophers, 1; black gophers, 1; silver pheasants, 3; golden pheasants, 4; Amherst pheasants, 2; Reeves pheasants, 2; common pheasants, 4; Canada geese, 3; golden eagles, 1; bald-headed eagles, 1; hawks, 7; owls, 2; pea fowl, 1; ringtail monkey, 1; Rhesus monkey, 2; pine marten, 5; fox squirrels, 3; black squirrels, 2; racoons, 2; turkey buzzard, 2; pelicans, 1; woodchucks, 1; seagulls, 1.

RECREATION.

During the year we were able to provide, at small cost, three first-class tennis courts on the recreation grounds near the pavilion, which were largely taken advantage of both by residents and tourists.



Hot Sulphur Swimming Pool at Government Baths, Banff.

The area of these grounds contains all the essentials for practically every outdoor sport played in the country—baseball, football, tennis, field athletics, and cricket—but owing to the depletion of the ranks of our young men by enlistment there was not so much of the more strenuous description of sport indulged in this year.

There was at one time a suggestion that the football field should be adapted for pony polo, but the proposal did not materialize.

The proposal to put up a permanent toboggan slide could not be handled this year for lack of funds, but is being kept in mind.

The pony-hiring business was brisk during the greater part of the season, and a considerable number of hunting and exploring parties registered at Banff.

Both bathing establishments were again largely patronized, the large new pool at the Cave and Basin being very popular. This pool is probably the largest and best equipped outdoor pool in Canada, if not on the American continent and, besides the bathers, attracted large crowds of spectators to the galleries, daily, during the season.

The golf course was also largely patronized, especially during the month of August—the season, up till the end of that month, being spoken of as almost a record one.

During the winter Mr. Mather had the skating rink on the river and also had the curling rinks in hand. While in point of numbers there was not the usual attendance, the provision of these facilities for winter sports was very much appreciated.

ANGLING.

There are no official means of keeping record of the principal catches of fish, and any statement of actual numbers must be based on averages in certain districts. I have reason to believe, however, that especially in the lakes at a considerable distance from the centres of settlement, good catches were made. I have heard of parties having good sport at Spray lakes, Mystic lake and Minnewanka, and one or two good ones are reported as having been taken out of the Bow river at Castle and near Canmore. This river, however, was very high and muddy during the greater part of the season and did not give the usually fair sport during at least two months in the height of the season. I am hopeful that results will soon be apparent from the operations at the fish hatchery.

FISH HATCHERY.

Although this hatchery is handled by another department it is of the greatest interest to the Parks Branch as the reason for its establishment was the restocking of the angling waters within the Rocky Mountains park. Being in operation for less than three years, it is too early yet to speak of results, but very large numbers of young fish of various kinds have been turned into lakes and streams in the park, and in all probability there will be an excellent return in the course of the next few years, which will justify the establishment's existence and, the widening of its scope.

The superintendent of the hatchery, in his scheme of improvement and beautification of the grounds, has wrought a wonderful change at a point which might formerly have been called an eyesore. The ground has been graded, lawns have been formed, and ornamental ponds in which mature trout have their home, have been constructed. The whole establishment is a model of order and cleanliness, and with the draining of the small sulphur water slough at the rear of the premises the place is a credit to the park, and is a continual point of interest to visitors, who come there to look over the work, in large numbers.

CAMPING IN THE PARK.

There was a considerable falling-off in the number of individuals and parties camping in the park during the year, both in proximity to the townsites and in the mountains. This was principally due to weather conditions.

The permanent camps at lake Louise, lake Agnes and the camp at the Alpine Club were well patronized.

Attention was given to shack tents which remain up from year to year and are thus liable to become dilapidated, but little difficulty was experienced in getting owners to look after these places and to keep them in tidy repair.

EMPLOYEES ON ACTIVE SERVICE.

The park as a whole has done magnificently in sending her young manhood to the front, and in common with most of the other eligible young men in the park many of our own employees have gone to Europe and are upholding the best traditions of the British race. I am in receipt of frequent communications from the boys at the front and am glad to be able to record that promotion is rapidly coming to a great many of them.

GENERAL NOTES.

New maps and guides to the Banff district were available for distribution towards the latter end of the season, and were in strong demand. Our large supply of parks' literature was entirely cleared out by the beginning of October, except for the general guide referred to.

Owing to the shortness of the money market, it was decided not to hold a sale of lots during the year. A few lots were offered for application but applications did not ensue. A considerable number of agreements were cancelled owing to the non-compliance with conditions, and also at the request of holders who saw no prospect of being able to build during the year.

During the year we have received every possible assistance, as usual, from the members of the detachment of the Royal Northwest Mounted Police. The personnel was changed entirely once during the year, but this made no difference to the usual courtesy and attention to duty, which marks this corps in the west.

S. J. CLARKE.

APPENDIX 2a.

REPORT OF THE CURATOR OF BANFF MUSEUM.

The number of visitors to the museum was far in excess of any previous year, accounted for by the great number of Americans travelling to the San Francisco exhibition.

Mr. Harlan I. Smith, archaeologist, of Ottawa, arrived about the end of June and immediately proceeded to continue his work of last year—that of improving the appearance of the exhibits, etc., in the museum, and having additional cases made.

Cases were made for the buffalo, for the ptarmigan, two extra Herbarium cabinets (much needed), and several nicely made signs were added during the time Mr. Smith was here.

During the past winter I got many natural history, etc., notes of back years into better shape.

The literature on park subjects issued by the Parks Branch for free distribution was eagerly taken up by visitors to the museum, same soon being exhausted, so great was the demand.

The pamphlets consisted of: The first edition of the museum catalogue; The Fish of the Rocky Mountains Park; Geology of the Park; Glaciers; and the last Annual Parks' Report.

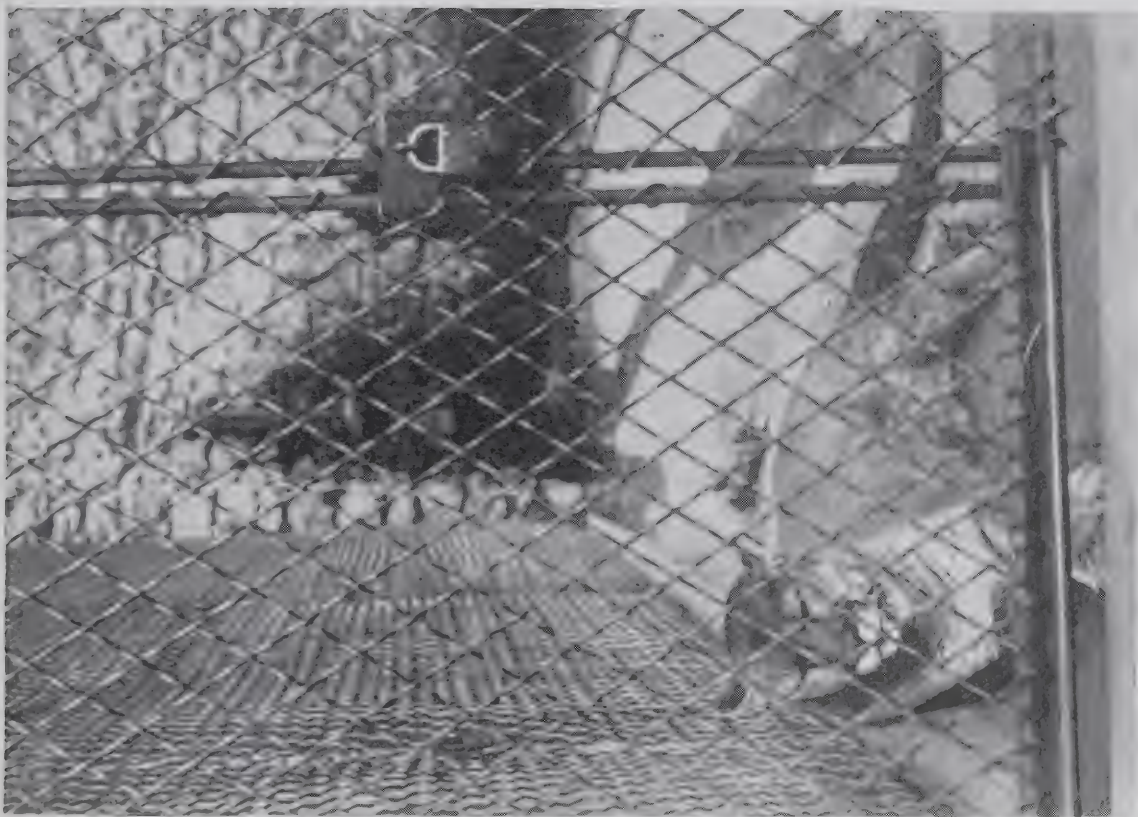
BIRDS.

I kept track of the wild bird arrivals last spring and early summer. This is useful information to have and is quite a help in getting a knowledge of our park birds.

I was surprised to see a western robin and a tree swallow about lake Myosotis, altitude over 7,000 feet, Ptarmigan valley. The only other birds seen in this valley were: Swainson's Rosy Finch (on the mountains), and a ptarmigan and chicks.



Black Bear in Jasper Park.



Mountain Lion in Banff Zoo.

During the migratory season in spring and early summer, quite a few birds evidently (during the night flights, etc.) come in contact with the wires about Banff, as dead birds are to be found every year.

Bird arrivals to date this spring: Swainson's Rosy Finch (*Leucosticte tephrocotis*) in very large flocks—first seen March 12; Western Robin (*Planesticus migratoria propinqua*)—first seen March 18; Mountain Bluebird (*Sialia artica*)—March 19; Juncos—March 14.

The Western horned owl is increasing in numbers, at least around Banff. As it destroys many mice it should not be interfered with.

The American dipper (*Cinclus mexicanus unicolor*) has been accused of eating fish fry. But I decidedly say it is not guilty. Its habit of taking the larvæ of water insects, etc., which cling to and are under rocks, etc., at the bottom of running streams, sometimes where fish fry may congregate for their own feeding, may have been the reason for the old idea that the water ousel, as it is sometimes called, lived on fish fry. I have never yet seen this bird with fry in its bill, and I have watched it time and again while performing its most interesting and various methods of diving, running along the bottom of rapid running streams, etc.

The dipper remains with us all winter, and is supposed to sing more in the fall and winter, than in summer. It has no bad habits and should never be interfered with. Last January at a temperature of 27° below I saw one of these birds dive over and over again, remaining under water for some time and on emerging from the water stand on the ice—in what was the only open-water of a pond and it evidently enjoyed this.

INSECTS AND SPIDERS.

I collected in all orders of insects during the season, and spiders, and was fortunate in having quite a number of moths, beetles, bees, wasps, caddis flies, etc., and spiders, identified by different specialists.

On my fortnightly trips to the meteorological station I collected material, especially on my returning—taking a different slope or gully each trip. In this way I descended all the descendable gullies of Sulphur mountain facing east.

In caddis flies a new species was collected.

In spiders two new species of jumping spiders were collected.

On May 21 and 22 I had two days collecting with Mr. F. W. L. Sladen, Dominion Apiarist, during which quite a few bees were collected—Mr. Sladen arranging others previously collected for the museum.

September 14 and 15 I accompanied Dr. C. Gordon Hewitt, Dominion Entomologist, on trips of investigation into mosquito areas about Banff, and sent him all the museum's collection of mosquitoes for determination.

October 4 and 6 I went with Mr. J. M. Swain, M.Sc., assistant entomologist for forest insects, Ottawa, to bark beetle localities about Banff, where Mr. Swain secured many specimens, and I received information. Before leaving Mr. Swain kindly went over the museum beetles, naming the same, and others were sent to him later on.

In the Ptarmigan valley I collected quite a few different insect genera on Ptarmigan mountain glacier, at an altitude of about 10,000 feet; the season was rather poor on account of so much rain.

The butterflies in this valley were alpine, mostly chionobas, colias, Argynnis, and Anicia species.

FLORA.

On July 20 I left for the Alpine Club camp in Ptarmigan valley.

The flora of this valley (altitude about 7,000 feet) is mostly alpine and arctic. Many plants were over flowering on my visit. Some of the more noticeable were:

Anemone occidentalis—western anemone; fairly common, and seeding. *Anemone drummondii*—Drummond's anemone. *Anemone globosa*—the vari-coloured anemone. *Thalictrum occidentale*—western meadow rue; abundant Red Deer valley. *Ranunculus eschshaltzi*—mountain buttercup. *Aquilegia flavescens*—yellow columbine. *Trollius laxis*—Globe flower. *Delphinium* sp.—larkspur. *Actaea rubra*—Baneberry. *Papaver alpina*—arctic poppy; never common. *Myosotis* sp.—forget-me-not; abundant. *Pedicularis bracteosa*—bracted lousewort; a draft form, abundant. *Castilleia miniota*—mountain Indian paint brush. *Castilleia pallida*—white Indian paint brush.

A number of sheets of plants were added to the herbarium, among them fifty sheets of grasses.

On August 5 I had an outing with Dr. Malte, Agrostologist of the Experimental Farm, Ottawa, during which grasses were collected for the museum herbarium, and information obtained.

In fungi I collected some, and with previously collected specimens, was fortunate in having them named by Prof. A. Murril, Ph.D., of the New York Botanic Gardens.

The tree case in the museum was about completed, five specimens being added, viz., Mountain balsam fir, Engelmann's spruce, white-barked pine, and Alpine larch.

FOSSILS.

A few were collected in Ptarmigan valley.

CRUSTACEÆ.

In parts of lake Minnewanka early in May there were vast numbers of a minute red crustacean known as copepoda. Dr. C. Gordon Hewitt, Dominion Entomologist, says these form one of the chief articles of diet for fish.

ADDITIONS TO THE MUSEUM.

No. 93. Grizzly bear head.

No. 94. Little chipmunk from valley.

No. 95. Little chipmunk from Sulphur mountain.

A good specimen Dolly Varden trout (*salvelinus parkei*) from Spray river near the Spray lakes—weight, 6 pounds.

No. 459. American coot.

No. 460. Mearnsi Junco.

No. 461. Mearnsi Junco.

No. 462. American Redstart.

No. 463. White-winged crossbill—male.

No. 465. Wilson's snipe—male.

2 skins Thick-billed redwing.

The Wilson's snipe had a 2-inch or so long stick imbedded in the flesh and bone of the primary wing when caught by Wm. Fife, game and fire-guardian; perhaps the bird had flown against the branch of a tree while fleeing from a hawk.

The weather report is appended.

Of the winter weather, January was by far the coldest of any month in any year since the Banff meteorological records have been kept, viz., 1888. The mean temperature for the month of January, 1916, being -13.02 , whereas the lowest mean temperature of January before was -3.0° , in 1894.

The spring of 1915 was much earlier than usual, and after a comparatively wet June and July (which caused some local damage in small floods) the remainder of the year was more dry, the year ending with very little really cold weather.

After January, 1916, and the first week of February, which were excessively cold, the weather became comparatively mild, with a genuine chinook on February 14, etc., when the weather was pleasant for some days. March was moderately mild, with a foot or more snowfall.

The mean temperature for February, 1916, was $15^{\circ}.6$, and for March, 1916, $27^{\circ}.9$.

A peculiar overturning of temperature took place most of January, the very cold strata of air in the valley possibly reached to 6,000 feet or so altitude, while above that 6,000 feet or so altitude the temperatures were as a rule higher even to very much higher.

On the 23rd January in the valley we had a blizzard, the maximum reaching only to $-23^{\circ}.5$. This blizzard only reached to half-way up Sulphur mountain or so, and the maximum temperature on top of Sulphur mountain was 22° above zero, or 45.5° higher maximum temperature on top of Sulphur mountain than in the valley.

NORMAN B. SANSON.

APPENDIX No. 2b.

THE ALPINE CLUB OF CANADA.

BANFF CLUB HOUSE.

The Alpine Club House, at Banff, was, as usual, open all the season of 1915 for the accommodation of members and their friends. The attendance was good considering the large numbers of members of the club who are serving their country.

As in other years, many strangers, mostly this season from the United States, came for accurate information about the mountains. Apparently the Alpine Club is the only body which has such information available, and to disseminate it is one of the main objects of its existence.

Several ascents were made of Mts. Rundle, Cascade and Edith. Various expeditions were also made to Mt. Assiniboine, but the uncertain weather prohibited climbing that fine peak.

Visiting members expressed great delight at the new bath accommodation at the Cave and Basin, but wondered much that no bridle path was cut through the woods from the Middle Spring road to the lower baths—a work of no great difficulty. This would make a pleasant circular tour from the Bow Bridge to the Upper Springs and back by the Cave and Basin to the bridge again. Members look forward to the day when the Upper Springs will also be suitably equipped.

Visitors to the Club House were drawn from the following places:—

CANADA—

British Columbia—Revelstoke, Sidney, Vancouver, Vernon, Victoria, Wilmer.

Alberta.—Calgary, Didsbury, Edmonton, Green Court, Lethbridge, Macleod, Sarcce Camp, Tomahawk, Vegreville, Westlock.

Saskatchewan.—Prince Albert.

Manitoba.—Portage la Prairie, Winnipeg.

Ontario.—Ottawa, Toronto.

Nova Scotia.—Windsor.

UNITED STATES—

Connecticut.—Waterbury.

Illinois.—Chicago.

Indiana.—LaFayette.

Massachusetts.—Wellesley.

Maryland.—Baltimore.

Minnesota.—Minneapolis.

New Jersey.—South Orange.

New York.—Brooklyn, New York.

Virginia.—Alexandria.

Pennsylvania.—Pittsburgh.

ENGLAND—

Darwen.—London.

NEW ZEALAND.

THE ALPINE CLUB OF CANADA—PTARMIGAN LAKE CAMP.

The tenth Annual Camp of the Alpine Club of Canada was held in the Ptarmigan Lake valley, a few hundred yards below the pass, from July 13 to 26, 1915. This



Members of the Canadian Alpine Club.

delightful region is but little known, and it is hoped that the action of the club in holding a camp in it, and the consequent wide attention directed thereto by influential members who were present, by newspaper reports, and by the club's own publications, will render it more familiar to the world at large.

It is easy of access, being but eight miles or so north of Lake Louise station along a plain if boggy trail.

For the first week the club experienced the worst weather it has ever "enjoyed" at a camp. Heavy falls of wet snow rendered climbing too dangerous to be attempted.

and camp conditions by no means of the pleasantest. However, every one present made the best of things like true sportsmen (and women), and when the fine weather came later appreciated it all the more.

A subsidiary camp was placed at Hatchet lake on the divide between the waters of the Red Deer and the Bow rivers, a delightful neighbourhood, quite unknown, and very convenient for the ascent of either the White or Black Douglas.

One of the great charms of this region is the number of little mountain lakes it contains. From the summit of Ptarmigan peak, sixteen were counted of varying size.

Among the principal ascents made were: Black Douglas (11,015 feet), mount Richardson (10,115 feet), Ptarmigan peak (10,060 feet), Pika peak (10,015 feet), and mount Redoubt (9,510 feet). Pika peak affords a really fine rock climb, worthy to be compared to the Dolomites, which present European conditions render unattainable. The White Douglas was impossible owing to the dangerous condition of the snow.

There were many attractive expeditions through the various valleys, and good fishing was obtained in the Pipestone creek in spite of the abnormally high water.

A distinguished feature of the camp was the "patriotic night" held around the camp fire. Nearly seventy members of the club are under arms for their country; their names were recalled and a standing vote of appreciation was passed. Account was given of the motor ambulance which the generosity of the club has provided for wounded soldiers. Several of the members have been severely wounded, one is a prisoner in Germany, but so far none has been killed. Several have been mentioned in despatches for distinguished conduct, Major Hesketh has received the D.S.O., and many have been promoted. W. N. Rowell, M.P.P., leader of the opposition in the Ontario legislature, made a stirring address. American members expressed keen sympathy with the Allies, and the meeting closed with an impressive singing of the National Anthem, in which the mountains around joined with their echoes.

Owing to war conditions the attendance was much smaller than usual; 103 being placed under canvas, and twenty-three members graduating to active rank. Among the more notable present at the camp and the club house were: Jas. Macoun, C.M.G., Assistant Dominion Naturalist; N. W. Rowell, M.P.P., the Hon. Mr. Justice Galt, of Winnipeg; Mrs. Henshaw, the noted botanist, who is honorary secretary of the club; and Frank Yeigh, the well-known author and lecturer. In the scholastic world, well-known names were: Dr. W. E. Stone, President of Purdue University, Indiana; Prof. A. G. Christie, Johns Hopkins University, Baltimore; Prof. C. B. Sissons, of Toronto; Mrs. Vincent, the wife of the President of the University of Minnesota; Miss Gena Smith, the principal of Edgehill College, N.S.; and Miss Virtue, the head of St. Alban's College, Prince Albert.

There were present members of the English, Swiss, American, and New Zealand Alpine Clubs, of the Appalachian Mountain Club, of the Mazamas and of the Royal Geographical Society

Those present at the camp were drawn from the following places:—

CANADA—

British Columbia.—Invermere, Revelstoke, Vancouver, Vernon, Wilmer.

Alberta—Banff, Calgary, Cowley, Edmonton, Green Court, Iron Springs, Lethbridge, Macleod, Sarcee Camp, Tomahawk, Westlock.

Manitoba—Virden, Winnipeg.

Ontario—Ottawa, Toronto.

UNITED STATES—

Indiana—LaFayette.

Massachusetts—Boston.

Maryland—Baltimore.

Minnesota—Minneapolis.

New Jersey—Summit.

New York—Brooklyn, New York.

Virginia.—Alexandria.

Pennsylvania.—Pittsburgh.

ENGLAND—

Darwen.

SWITZERLAND—

Interlaken.

Several independent exploratory expeditions of importance were made by club members. Miss Jobe again visited the neighbourhood of mount Alexander Mackenzie; Professor Holway climbed mount Longstaff and mount Fitzhugh (wrongly called Geikie by the people of Jasper). A large party of members, including Mr. and Mrs. A. H. MacCarthy of Wilmer, and Dr. and Mrs. Stone of LaFayette, Indiana, explored and made many first ascents in the Southern Selkirks. To the North Fork of the Illecillewaet two separate expeditions were made by Dr. J. W. A. Hickson, of Montreal, and Professor Sissons, of Toronto, respectively.

It is a notable result of the growing interest in the mountains created by the club that many members were unable to secure the services of the trained Swiss guides, as their time was fully occupied. Not many years ago they were more or less ornamental adjuncts of the hotels.

APPENDIX No. 2c.

ANALYSIS OF NATIONALITIES OF VISITORS TO ROCKY MOUNTAINS PARK.

Bathers and Visitors at Upper Hot Springs, April 1, 1915, to March 31, 1916:—

Canada.. . . .	11,435
United States.. . . .	559
England.. . . .	68
Scotland.. . . .	27
Ireland	10
France	4
Australia.. . . .	7
Total.. . . .	12,110

Bathers and Visitors at Cave and Basin, April 1, 1915, to March 31, 1916:—

Number of bathers passing through turnstile.. . . .	23,262
Visitors to cave.. . . .	23,197
Total.. . . .	46,459

Visitors to Cave from:—

Canada.. . . .	8,531
United States.. . . .	14,450
England.. . . .	50
Scotland.. . . .	10
Ireland.. . . .	3
Australia.. . . .	75
New Zealand.. . . .	45
South Africa.. . . .	5
Argentina.. . . .	9
China.. . . .	4
Japan.. . . .	15
Total.. . . .	23,197

Visitors to the Museum:—

Canada.. . . .	5,150
United States	6,240
England.. . . .	184
Scotland.. . . .	61
Ireland.. . . .	19
Wales.. . . .	5
Australia.. . . .	50
New Zealand.. . . .	11
Tasmania.. . . .	3
South Africa.. . . .	3
West Indies.. . . .	4
Jamaica.. . . .	2
China.. . . .	12
Russia.. . . .	4
Hong Kong.. . . .	4
Argentina.. . . .	8
Cuba.. . . .	4
Norway.. . . .	1
Holland.. . . .	11
France.. . . .	1

Spain.. . . .	1
Greece.. . . .	4
Italy.. . . .	8
Hawaii.. . . .	2
Porto Rico.. . . .	8
Switzerland.. . . .	12
Japan.. . . .	8
	<hr/>
Unregistered estimated.. . . .	11,820
	3,000
	<hr/>
Total.. . . .	14,820
	<hr/>

Visitors to Fish Hatchery:—

May.. . . .	66
June.. . . .	372
July.. . . .	485
August.. . . .	557
September.. . . .	751
October	107
November to March.. . . .	705
	<hr/>
Total.. . . .	2,367
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Number of visitors registered at the Alberta hotel, 1915-16:—

Canada.. . . .	2,134
United States.. . . .	482
Australia.. . . .	14
New Zealand.. . . .	1
England.. . . .	4
Japan.. . . .	3
Tasmania.. . . .	2
India.. . . .	2
China.. . . .	1
Scotland.. . . .	1
	<hr/>
Total.. . . .	2,644

Numbers of visitors registered at The Homestead and Bungalow Temperance Hotel, from February 20, 1915, to March 31, 1916:—

Canada.. . . .	1,097
British Isles.. . . .	5
India.. . . .	3
Australia.. . . .	7
United States.. . . .	888
	<hr/>
Total.. . . .	2,000
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Number of visitors registered at Sanatorium Hotel (closed in early fall):—

England.. . . .	3
Australia.. . . .	5
Canada.. . . .	1,137
United States.. . . .	1,204
	<hr/>
Total.. . . .	2,349
	<hr/>

Number of visitors registered at King Edward Hotel, April 1, 1915, to March 31, 1916:—

Canada.. . . .	3,111
United States.. . . .	2,350
Australia.. . . .	18
New Zealand.. . . .	10
England.. . . .	27
Belgium.. . . .	3
Ireland.. . . .	3
	<hr/>
Total.. . . .	5,501
	<hr/>

West Indies..	38
Mexico and Central America.. . . .	10
South America	13
Total.. . . .	61

England	79
Ireland.. . . .	3
Scotland	19
France.. . . .	14
Italy.. . . .	5
Belgium.. . . .	7
Switzerland	3
Germany.. . . .	2
Holland.. . . .	7
Other European countries	6
Total	145

Australia.. . . .	50
New Zealand.. . . .	27
China.. . . .	20
India	14
Hawaii.. . . .	14

Philippine Islands.. . . .	2
Asia.. . . .	5
Total.. . . .	132

Conducted Parties (otherwise unlocated).

Raymond & Whitcomb.. . . .	436
T. Cook & Sons.. . . .	193
Gillespie, Kinport & Baird.. . . .	612
Marsters.. . . .	252
Delta Tours.. . . .	38
Gatis Tours.. . . .	113
Honeyman Party.. . . .	23
Dean Tours.. . . .	76
Total.. . . .	1,743

Unlocated.. . . .	325
Total, 1915.. . . .	22,019
Total, 1914.. . . .	8,022
Increase.. . . .	13,997

Statement of Persons registered at Chateau Lake Louise, Lake Louise, season 1915:—

Manitoba.. . . .	31
(Winnipeg).. . . .	147
Saskatchewan.. . . .	122
Alberta.. . . .	396
British Columbia	127
Total.. . . .	823

Newfoundland.. . . .	1
Prince Edward Island.. . . .	2
Nova Scotia.. . . .	19
New Brunswick.. . . .	29
Quebec.. . . .	158
Ontario.. . . .	516
Total	725

Maine.. . . .	120
New Hampshire.. . . .	55
Vermont	106
Massachusetts.. . . .	946
(Boston).. . . .	1,020
Connecticut.. . . .	439
Rhode Island.. . . .	145
New York.. . . .	1,405
(New York City)	3,043
Pennsylvania.. . . .	628
(Philadelphia).. . . .	825
(Pittsburg).. . . .	388
New Jersey	860
Delaware.. . . .	57
Maryland.. . . .	498
District of Columbia	307
West Virginia.. . . .	97
Virginia.. . . .	239
Total.. . . .	11,158

Kentucky.. . . .	170
Tennessee.. . . .	189
North Carolina.. . . .	67
South Carolina.. . . .	61
Georgia	158

Alabama.. . . .	113
Mississippi.. . . .	48
Louisiana.. . . .	189
Florida.. . . .	54
Total.. . . .	1,050

Ohio.. . . .	988
(Cleveland).. . . .	624
(Cincinnati)	396
Michigan.. . . .	507
(Detroit).. . . .	341
Indiana.. . . .	622
(Indianapolis).. . . .	150
Illinois.. . . .	947
(Chicago).. . . .	2,190
Iowa.. . . .	880

Total	7,667
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Missouri.. . . .	142
(St. Louis).. . . .	562
(Kansas City).. . . .	181
Kansas.. . . .	122
Arkansas.. . . .	33
Oklahoma.. . . .	66
Nebraska.. . . .	178
(Omaha)	42
Texas	158

Total.. . . .	1,485
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Wisconsin.. . . .	441
(Milwaukee)	210
Minnesota.. . . .	280
(Minneapolis).. . . .	558
(St. Paul).. . . .	239
North Dakota.. . . .	136
South Dakota.. . . .	86

Total.. . . .	1,950
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Washington.....	147
Oregon.....	87
California.....	197
(San Francisco).....	95
(Los Angeles).....	132
Nevada.....	4
Total.....	662
Montana	8
Wyoming.....	2
Idaho.....	12
New Mexico.....	2
Colorado.....	30
Utah.....	2
Arizona.....	9
Total.....	65
Alaska.....	1
West Indies.....	26
South America.....	9
Mexico and Central America.....	9
Total.....	45
England.....	105
Ireland	5
Scotland.....	11
France.....	14
Spain.....	2
Belgium.....	1
Switzerland.....	2

Holland.....	11
Other European countries.....	3
Total.....	154
Australia.....	41
New Zealand	16
Japan.....	6
China.....	13
Hawaii.....	28
India.....	7
Philippine Islands.....	8
Africa.....	5
Total.....	124

Conducted Parties (otherwise unlocated).

Raymond & Whitcomb.....	814
Frank's Tours.....	34
T. Cook & Son.....	116
Marsters' Tours.....	134
Gillespie, Kinport & Baird	323
Honeyman's Tours.....	23

Total..... 1,444

Unlocated.....	364
Total, 1915.....	27,716
Total, 1914.....	8,280
Increase.....	19,436

Special Parties handled by Railway Company during season of 1915.

June	4. New England Wholesale Grocers.	July	6. J. M. Miles private car party.
	American Iron, Steel and Heavy		Eugene Atwood private car party.
	Hardware Association.		Gillespie, Kinports & Baird's Tour C.
	W. H. Woods' party to Northern		Raymond & Whitcomb Tour 111.
	Baptist Convention at Los Angeles.		Thos. Ryan private car party.
	National Grocers' Association.	"	7. Frank Tour Co. Tour F.
"	5. Raymond & Whitcomb private car		Murat Shriners.
	party (Car Twilight).		Adkar Bedowin and Mirza Shriners.
	Ray & Whitcomb private car party		Richmond Shriners.
	(Clarkson Cowl and family).	"	8. Mecca, Almas, Kismet, Bourni and
	Governor of New Jersey and party.		Crescent Shriners.
"	6. McFarland party.		Savanah Shriners.
"	7. National Wholesale Grocers' Assn.		McCann's Tour Shriners.
"	8. Raymond & Whitcomb Alaska Tour		Southern Shrinedom.
	No. 50.		Escanaba and Copper County
	Delta Tour No. 1.		Shriners.
	Honeyman's party.	"	9. Alcazar Temple Shriners.
"	12. Women's Club Tour.		Lu Lu Temple (three sections).
	National Assn. for the Study and		Saladin Temple.
	Prevention of Tuberculosis.		Alexander's Tour.
"	14. Pros. Baumgartner's party (Tourist	"	10. National Laundryman's Assn. party.
	Sleeper East 37).		Dr. Holmes' private car party.
"	16. Raymond & Whitcomb Tour 43.		Syria Temple Pittsburg Shriners.
"	19. National Electric Light Assn.		Zenobia Temple Shriners.
	American Library.		India Shrine.
"	20. Krueger Assn. Tour.		Sons of American Revolution.
	McFarland party.		McFarland tour party.
"	24. Senator Oliver private car party.	"	11. Austin Texas Shriners.
	E. H. Ellison's private car party.	"	12. Rev. C. A. Kelly's party.
"	27. Windsor Record contest party.		I. A. Place, private car party.
"	28. Raymond & Whitcomb Tour 48.	"	13. Raymond & Whitcomb party. De
	Thos. Cook & Sons Tour T.		Lux party.
	Raymond & Whitcomb Tour 56.		Raymond & Whitcomb Pilgrim Tour J.
"	29. Draper-Kramer Tour.		National Assn. Real Estate Ex-
July	1. Y.M.C.A. Boys from Chicago.		change.
"	5. Boston Teachers' Club.		Gillespie, Kinport's & Baird's party.
	Beacon Tour No. 60.		Tour C.

Special Parties handled by Railway Company during season of 1915—*Concluded.*

- July 14. Service Tour F.
Troy Hill Maennerchœr Club.
Gillespie, Kinport's & Baird's party.
- " 15. Col. T. T. Smith's party.
F. P. Phillips' private car party.
- " 16. Gillespie, Kinport's & Baird's Tour S.
Gillespie, Kinport's & Baird's Tour X.
- " 18. E. E. Taylor's private car party.
Governor Dunn's private car party.
- " 19. Frank Tour De Lux No. 10.
Ancient Arabic Order of Shriners.
Gillespie, Kinport's & Baird's Tour Y.
- " 20. W. H. Woods Stanley party.
Raymond & Whitcomb Tour 60.
McFarland Tour.
- " 22. American Wine Growers.
International Milk Dealers.
- " 24. Rochester House party.
Kistler-Marshall party.
- " 26. Delta Tour special car party.
New England Elks.
Gattis Tour No. 2.
Raymond & Whitcomb Tour 7.
Hiram Sibley private car party.
- " 27. Henry C. Cox special car party.
B. & P. Order of Elks. Boston Lodge.
Raymond & Whitcomb Pilgrim Tour L.
- " 28. Universal Church Convention.
- " 29. Maharajah of Kaparhala private car party.
Dr. H. H. Rusby's party.
O. L. Hall's party.
Jersey City Elks.
Cincinnati Chamber of Commerce.
Prof. Sherzer's party.
Mass. Knights of Columbus.
- " 30. Mrs. E. Cuthbert's Tour.
Raymond & Whitcomb Nat. Educational party.
International Assn. of Rotary Clubs.
- Aug. 1. Marsters' United Drug Co., special.
- Aug. 1. Rotary Club.
- " 2. National Assn. of Deaf and Dumb.
Raymond & Whitcomb Tour 73.
- " 3. Gillespie, Kinport's & Baird's special.
Raymond & Whitcomb Tour M.
Frank Tourist party F.
- " 4. Gillespie, Kinport's & Baird's Special Tour A.
Gillespie, Kinport's & Baird's Special car party Z.
Gattis Tour 4.
National Tax Assn. party.
- " 5. Associate Collegiate party.
Bureau of Universal Travel.
Mr. Chas. E. Beury private car party.
Foresters of America special train.
- " 6. McFarland Tour.
- " 7. Knights of Columbus.
Raymond & Whitcomb Pilgrim Tour A-E.
- " 8. Dean party.
Taggart Tours.
Rex Tour.
Jones' Southern party.
- " 9. Raymond & Whitcomb Tour 119.
- " 10. Service Tour G.
Mrs. Meadows' Tour.
Raymond & Whitcomb Tour M.
- " 11. Frank Tourist Co. Tour 2.
- Aug. 12. De Lux Tour Co.
- " 13. A. A. Crane private car party.
- " 14. Mrs. Alexander's party.
- " 15. A. K. Carter's special train.
F. Brady, private car party.
- " 16. Raymond & Whitcomb Tour 104.
- " 17. Sanger's Tour.
Frank Tourist Co. 3rd Tour F.
Raymond & Whitcomb Tour D.
- " 20. American Pharmaceutical Assn.
McFarland Tour.
- " 23. Raymond & Whitcomb Tour 123.
Fraternal Order of Eagles.
- " 24. Raymond & Whitcomb Tour P.
Temple Tour No. 342.
- " 25. Prof. McKean and party.
Gregory Tour No. 5.
- " 27. Frost Wire Fence special.
- " 28. Bankers' special car party.
Minnesota Educational Tour N.E. 4.
- " 30. Stoddard party.
F. H. Ellison's private car party.
- " 31. Frank Tourist private car party.
Reading Frisco Club.
Thos. Cook & Sons Tour B.
Maryland Special Tour.
Raymond & Whitcomb Pilgrim Tour Q.
- Sept. 1. Tour B White Section American Bankers.
New England American Bankers.
Supreme Court Foresters of America Special.
- " 2. Marster's Tours.
Penn. Bankers Tour de Lux.
Ohio Bankers Special Train.
- " 4. Oklahoma Bankers Special.
Raymond & Whitcomb Tour 164.
- " 5. Gillespie, Kinport's & Baird's Tour E.
Pan American Road Congress.
- " 6. Raymond & Whitcomb Tour 143.
T. W. Lamont private car party.
- " 7. Raymond & Whitcomb Pilgrim Tour R.
McFarland's Cal. Tour.
- " 11. Rochester's Second House party.
- " 12. J. E. Weaver private car party.
- " 13. Raymond & Whitcomb Tour 142.
- " 14. Raymond & Whitcomb Tour S.
- " 17. Gillespie, Kinport's & Baird's Tour N-11.
- " 18. Emery W. Clark private car party.
- " 19. Hon. J. R. Yale private car party.
- " 20. National Assn. of Stationers.
W. H. Sage private car party.
- " 23. Gregory Tours.
- " 25. Raymond & Whitcomb Tour 170.
- " 27. Raymond & Whitcomb Tour 154.
C. Oliver Iselin private car party.
- " 28. Frank Tourist Co., Tour F.
American Institute of Architects.
Raymond & Whitcomb Pilgrim Tour U.
- " 29. W. P. Snyder's private car party.
Mr. Carl Stoeckel private car party.
- Oct. 3. International Engineering Congress.
- " 4. Raymond & Whitcomb private car party (Misses Smith).
- " 5. Raymond & Whitcomb Tour party.
Gates California Tour party.
- " 8. Gillespie, Kinport's & Baird's Tour C-11.
Marster's California Tour Special Train.
- " 9. Raymond & Whitcomb Tour 176.

Special parties handled by Brewster Transport Company.

	Parties.	Persons.
June..	21	788
July..	138	6,115
August..	98	5,092
September..	63	3,043
October..	16	462
Total..	336	15,500

SUMMARY.

Banff Springs hotel..	22,019
Chateau Lake Louise..	27,716
King Edward hotel..	5,501
Hot Springs hydropathic hotel..	2,500
Mount Royal hotel..	3,500
Grand View hotel..	278
Alberta hotel..	2,644
Homestead (Temperance hotel)..	2,000
Sanatorium hotel..	2,349
Summer cottagers and campers (estimated)..	6,000
Excursionists handled by Brewster Company..	15,500
Total..	90,007

Special parties otherwise unlocated:—

Handled by tourist agencies..	134
By private cars..	49

APPENDIX No. 2d.

TIMBER AND GRAZING.

The following comprises the second annual report of the Timber and Grazing Inspector for the Rocky Mountains park for the year ending March 31, 1916.

I wish to say that large bodies of dry timber are to be found all over the park, and it seems that in the early days of the park no particular locality was immune from the destructive effects of forest fires, whether they were near the railroads or at some distance.

A peculiar thing that I noticed during the past season, was that in one locality where we were doing some excavating at a depth of four feet I found that the soil had been burnt, on top of this was a deposit of two feet of soil and indications of another fire, then a deposit of one foot and another fire, and then a deposit of a foot on the surface of which trees were growing at least one hundred and fifty years of age, so that it looks to me as if fires swept through this country long before the advent of the railroads.

During the past season, on account of a bountiful supply of moisture and more care being exercised by tourists and others, we have had no fires in the park that caused any damage to the growing timber.

In former years the Canmore Coal Company and McKay, Pennycock & Jackson had men working in the vicinity of Spray lakes, but during the last season no operations were conducted there.

The largest body of dry timber within the confines of the park lies in the valley of Brewster creek, but on account of its inaccessibility and distance from any shipping point no one has yet attempted to operate in it.

During the past winter three different companies have been operating along the automobile right of way over the Vermilion pass, taking sawlogs, mining props, and cordwood, and at the present time there is a portable saw-mill engaged in cutting sawlogs into lumber at Castle mountain and shipping it to Calgary and other prairie points.

The return for the past season's cut at the above points are not yet in, but I should judge that at least 2,000 cords of wood and some saw timber had been taken out.

Several different parties have been taking out cordwood and mining props at Stephen, west of lake Louise, but on account of the great depth of snow I should judge that not more than 2,000 cords would be taken out at this point.

The Canadian Pacific Railway have taken out in the vicinity of their hotel at lake Louise about 1,000 cords, but as they have not yet made their returns this is an approximate estimate.

I might mention that within the park bounds considerable mining activity had been displayed during the past summer, one talc claim being located in the Vermilion pass and two copper claims being opened up near Eldon on the C.P.R. line—one of these companies shipping out a number of cars of copper ore to the smelter at Trail, and the other company doing considerable development work.

Twenty-nine grazing permits were issued during the past season; this is a substantial increase over former years—this increase was brought about by compelling parties who had animals running at large to pay up.

On account of copious rains last summer the feed in the park was exceptionally good and the number of animals pasturing within its bounds can be materially increased without encroaching on the pasturage of wild animals.

J. F. MORRISON.

APPENDIX No. 3.

REPORT OF THE SUPERINTENDENT OF YOHO AND GLACIER PARKS.

Owing to the war conditions which have existed throughout the past year this has been in many ways a peculiar year for the Dominion parks, and I venture to say that they have fully proved their worth and justified the expenditures which the Government has thought fit to make on their development from year to year, coming to the country's aid in its time of need.

During the past season thousands of American tourists have visited Canada, and to the great majority of these the Dominion parks have been the principal attraction. It is hard to realize the amount of money that has in this way been left in the country—money which, although it does not go directly into the pocket of the Government, still goes to the Canadian people, at a time when most needed. To the war we are indebted in a large measure for this unusually large tourist travel through our country, travel which, having its usual avenues of recreation shut off, was attracted by such features as the Dominion parks of Canada, which are without question among the foremost of the drawing cards which the railway companies and tourist agents have to offer the public.

In the Yoho and Glacier parks, during the past season, all hotels and private houses that had accommodation to offer have been filled to capacity with tourists, who, coming for the first time to visit us were eager to see all, were delighted and will come again if they are able, or those who having been before were returning to again take in the grandeur of our mountain scenery.

With reference to the work that has been undertaken in these two parks during the past season, I beg to report as follows:—

YOH0 PARK.

The first work undertaken was the usual cleaning up in the townsite of Field. This we commenced as soon as the weather would allow, which was early in April. A number of vacant lots were cleaned up and all refuse carted out to the nuisance ground; streets were raked over and gravelled; sidewalks repaired; and about fifty new trees planted along the streets to replace those that had died or failed to take root. In May a small gang of men were started to work on the Yoho road, who at once went roughly over the whole road in order to open it up at once for travel, after which they completed the widening of the second Yoho canyon, which was all solid rock; the road between the first and the second canyons for a distance of about half a mile was also widened out and gravelled. At the switchback we put in a log cribbing for almost the entire length on the inside of the road, and replaced the old guard-rail, which was very light, with a good solid one made of peeled poles, for the full distance of this piece of road.

Considerable time was also devoted to the new diversion between the four- and five-mile posts on this road. At this point there is a very heavy cut on a steep grade and the sides of the cut on the upper side of the road had to be sloped to an angle sufficient to keep the material from constantly falling in and blocking the road. On this grade a guard-rail was also erected for the entire length of the grade. On the Emerald Lake road two sectionmen worked for the most of the summer and kept this road in excellent shape. No new work was undertaken, but on account of the wet season, and the heavy travel on this road they deserve great credit for the condition which it was always in, having nearly nine miles of road under their care. The Hector road was also gone over and cleaned up. No new road work of any kind was undertaken during the past season, but all existing roads were maintained in first-class condition.

TRAILS.

Two new trails were cut out and graded during the summer: One from lake O'Hara down McArthur creek to connect with the Ottertail trail, and the other from a point on the Emerald lake road up the Amiskwi valley to the boundary of the park—a distance of 15 miles. A cabin for the use of our fire wardens was built at a convenient spot on each of these trails. All the other existing trails in the park were cleaned out and kept in repair by the fire wardens. A new warden's cabin was also built at Takakkaw falls, which was the headquarters of Warden Howatson; and the footbridge over the Yoho river, which was washed away during the previous season, we replaced with a more substantial structure.

I cannot speak too highly of the work done, and the efficiency shown by the fire wardens in the park during the last fire season. They proved themselves to be a most useful body of men, and were of great value to me in conducting my work. Many small fires which might have developed into serious ones had they not been immediately extinguished, were attended to by them, and I am pleased to be able to report that outside the salaries of these men, not one dollar was spent for extinguishing forest or other fires, while a large amount of actual work was accomplished by them.



Valley of the Illecillewaet from Mt. Cougar, Mt. Sir Donald in Centre.

GAME.

Game in this park, I am sorry to say, is not as plentiful as I should like to see it, and I hope the time is not far distant when all game within the park limits will be protected as it is in other Dominion parks; the resident within the park will then have better hunting than he has now, by going a short distance outside the park area. Goat and bear are fairly abundant; there are some moose, and both white- and black-tailed deer.

GLACIER PARK.

At Glacier, as in other Dominion parks, the past season taxed the hotel accommodation to its limit in its endeavour to accommodate the large number of tourists who wished to stop off in the park. From Glacier House both the Asulkan and the Illecillewaet glaciers can be readily reached, either by pony or by a short walk, over excellent trails. Another very popular trip is that to the Nakimu Caves—being about 7 miles from the hotel—which will well repay the tourist for his stop-over; these can be best reached by pony. Unfortunately, owing to war conditions, we were not able to complete the road, which is now under construction, this year, but had to be content with keeping in repair that portion already built. For the first time, this summer, there was a regular stage making trips twice a day over this road. Most of the people who travelled by the stage, however, missed the attraction of a visit to the Caves owing to the team being unable to complete the whole distance. At the Caves we are fortunate in that we have been able to retain the services of Mr. C. H. Deutschman, their discoverer, as caretaker. During September, Mr. O. D. Finnie, inspecting engineer of mines for the Department of the Interior, made an extensive survey of a part of those caves at present not accessible to the public, and as a result it was found that by making about 15 feet of a tunnel in the rock a good entrance to the caves could be obtained; this work I would like to do as soon as conditions allow.

At Glacier this summer we filled a long-felt want by building a cabin for the use of our fire wardens stationed there. This cabin was mostly constructed by the wardens themselves, the only extra expense to the Government being that of the material used. It has been much admired by the many tourists passing it.

TRAILS.

All existing trails were gone over and cleared out just as soon as the season would allow, after which Mr. Calder, who was in charge of this work, moved over to Bear creek with a small party of men and commenced work on the new trail from there up the Beaver valley. This trail we completed for a distance of about fifteen miles from Bear creek, which has opened up a large part of the park formerly difficult of access.

During the month of December, quite an important event occurred at the Rogers Pass tunnel, when the centre headings, which the contractors have been working on from both ends, met in the centre, thus making a hole through this mountain, 5 miles in length. The contractors are still making very fast time with this work, and it is anticipated that before next winter the trains will be running through this tunnel. In connection with this work I am pleased to be able to report that the best of feeling exists between the park's officials and the tunnel authorities, who at all times have been most willing to assist us in the protection of the park's interests.

In this park I am also able to report the expenditure of not one dollar for forest fires, except the salaries of the wardens.

Statement of persons registered at the Mount Stephen House, Field, B.C., season 1915.

Manitoba.. . . .	12
(Winnipeg).. . . .	112
Saskatchewan.. . . .	24
Alberta.. . . .	773
British Columbia.. . . .	1,026
Total.. . . .	1,947

Nova Scotia.. . . .	1
New Brunswick.. . . .	7
Quebec.. . . .	62
Ontario.. . . .	208
Total.. . . .	279

Maine.. . . .	29
Vermont	27
New Hampshire.. . . .	23
Massachusetts.. . . .	167
(Boston).. . . .	133
Connecticut.. . . .	73
Rhode Island.. . . .	27
New York.. . . .	198
(New York City).. . . .	378
Pennsylvania.. . . .	100
(Philadelphia).. . . .	133
(Pittsburg).. . . .	46
New Jersey.. . . .	92
Delaware.. . . .	9
District of Columbia.. . . .	48
West Virginia.. . . .	61
Virginia.. . . .	15

Total.. . . . 1,577

Kentucky.. . . .	21
Tennessee.. . . .	7
North Carolina.. . . .	14
South Carolina	6
Georgia.. . . .	8
Alabama.. . . .	5
Louisiana.. . . .	14
Florida.. . . .	34
Mississippi.. . . .	3

Total.. . . . 112

England.. . . .	44
Ireland.. . . .	2
Scotland.. . . .	2
Australia.. . . .	13
New Zealand.. . . .	19
China.. . . .	6
Hawaii.. . . .	2

Total.. . . . 88

Ohio.. . . .	3
(Cleveland).. . . .	139
(Cincinnati)	56

Michigan.. . . .	89
(Detroit).. . . .	45
Indiana.. . . .	86
(Indianapolis).. . . .	16
Illinois.. . . .	122
(Chicago).. . . .	301
Iowa.. . . .	133

Total.. . . . 1,034

Missouri.. . . .	27
(St. Louis).. . . .	78
(Kansas City).. . . .	49
Kansas.. . . .	24
Arkansas.. . . .	7
Oklahoma.. . . .	4
Nebraska.. . . .	25
(Omaha).. . . .	14
Texas.. . . .	18

Total.. . . . 246

Wisconsin.. . . .	51
(Milwaukee).. . . .	23
Minnesota.. . . .	53
(Minneapolis).. . . .	90
(St. Paul).. . . .	43
North Dakota.. . . .	32
South Dakota.. . . .	18

Total.. . . . 310

Washington.. . . .	17
Oregon.. . . .	14
California.. . . .	42
(Los Angeles).. . . .	35
(San Francisco).. . . .	16
Nevada.. . . .	2

Total.. . . . 126

Montana.. . . .	3
Idaho.. . . .	4
Colorado	4
Arizona.. . . .	1
South America	5
Mexico.. . . .	4

Total.. . . . 21

Unlocated.. . . . 10

Globe Tours.. . . . 12

Total, 1915.. . . . 5,763

Total, 1914.. . . . 3,010

Increase.. . . . 2,753

Statement of persons registered at Emerald Lake Chalet, Emerald Lake, B.C.,
season 1915.

Manitoba.. . . .	3	Missouri.. . . .	5
(Winnipeg).. . . .	53	(St. Louis).. . . .	43
Saskatchewan.. . . .	20	(Kansas City).. . . .	8
Alberta.. . . .	137	Kansas.. . . .	3
British Columbia.. . . .	97	Nebraska.. . . .	12
		Texas	28
Total.. . . .	309	Total	99
Nova Scotia.. . . .	10	Wisconsin.. . . .	13
New Brunswick.. . . .	4	(Milwaukee).. . . .	31
Quebec.. . . .	39	Minnesota.. . . .	10
Ontario.. . . .	677	(Minneapolis).. . . .	63
		(St. Paul).. . . .	24
Total.. . . .	130	South Dakota.. . . .	2
Maine.. . . .	7	Total.. . . .	143
Vermont.. . . .	2	Washington.. . . .	15
Massachusetts.. . . .	61	Oregon.. . . .	21
(Boston).. . . .	73	California.. . . .	39
Connecticut.. . . .	17	(San Francisco).. . . .	41
Rhode Island.. . . .	13	(Los Angeles).. . . .	31
New York City.. . . .	339	Nevada.. . . .	2
New York.. . . .	52	Total.. . . .	149
Pennsylvania.. . . .	36	Montana.. . . .	1
(Philadelphia).. . . .	143	Colorado.. . . .	5
(Pittsburg).. . . .	18	Utah.. . . .	1
New Jersey.. . . .	56	Total.. . . .	7
Delaware.. . . .	6	England.. . . .	45
Maryland.. . . .	18	Ireland.. . . .	1
District of Columbia.. . . .	22	Scotland.. . . .	13
West Virginia.. . . .	5	France.. . . .	6
Virginia.. . . .	4	Germany	3
Total.. . . .	872	Holland.. . . .	2
Tennessee.. . . .	3	Total.. . . .	70
North Carolina.. . . .	6	Australia.. . . .	3
Georgia.. . . .	6	New Zealand.. . . .	5
Mississippi.. . . .	9	Japan.. . . .	2
Alabama.. . . .	4	China.. . . .	1
Louisiana.. . . .	8	Hawaii.. . . .	2
Florida.. . . .	3	India.. . . .	4
Total.. . . .	39	Total.. . . .	17
Ohio.. . . .	32	Total, 1915.. . . .	2,139
(Cleveland).. . . .	31	Total, 1914.. . . .	1,035
(Cincinnati).. . . .	13	Increase.. . . .	1,104
Michigan.. . . .	9		
(Detroit).. . . .	23		
Indiana.. . . .	10		
(Indianapolis).. . . .	6		
Illinois	49		
(Chicago).. . . .	115		
Iowa.. . . .	16		
Total.. . . .	304		

Statement of persons registered at Glacier House, Glacier, B.C., season 1915.

Manitoba..	8	Wisconsin..	122
(Winnipeg)..	51	(Milwaukee)	57
Saskatchewan..	41	Minnesota..	75
Alberta..	114	(Minneapolis)..	167
British Columbia..	296	(St. Paul)..	51
Newfoundland	2	North Dakota..	44
		South Dakota..	21
Total..	509	Total..	537
Nova Scotia..	14	Washington..	176
New Brunswick..	11	Oregon..	12
Quebec..	60	California..	63
Ontario..	144	(San Francisco)..	101
		(Los Angeles)..	71
Total..	229	Total..	423
Maine..	53	Montana..	7
New Hampshire..	23	Idaho..	8
Vermont..	43	New Mexico..	4
Massachusetts..	434	Colorado..	13
(Boston)..	454	Arizona..	5
Connecticut	190	Alaska..	5
Rhode Island..	79	South America..	7
New York State..	579		
(New York City)..	916	Total..	49
Pennsylvania..	338	England..	133
(Philadelphia)..	850	Ireland..	1
(Pittsburg)..	255	Scotland..	3
New Jersey..	540	France..	2
Delaware..	24	Italy..	1
Maryland..	161	Switzerland	3
District of Columbia	18	Holland..	5
West Virginia..	8	Denmark..	1
Virginia..	70		
Total..	5,065	Total..	149
Kentucky..	60	Australia..	22
Tennessee..	64	New Zealand..	9
North Carolina..	42	Japan..	3
South Carolina..	18	China..	7
Georgia..	105	India..	14
Alabama..	42	Africa..	1
Mississippi	15		
Louisiana..	45	Total..	56
Florida..	20	Unlocated..	134
Total..	411	Total, 1915..	12,977
Ohio..	314	Total, 1914..	4,009
(Cleveland)..	192		
(Cincinnati)	123	Increase..	8,968
Michigan..	210		
(Detroit)..	125	Conducted Tour (otherwise unlocated).	
Indiana..	62	Raymond & Whitcomb..	969
(Indianapolis)..	727	T. Cook & Son..	202
Illinois..	215	Gillespie & Kinports..	241
(Chicago)..	360	Alexander Tours..	193
Iowa..	248	Frank's Tours..	153
		Gattis Tours..	171
Total..	2,587	Miss Florence Rohr..	17
Missouri..	56	Dean Tours..	74
Cleveland..	160	Knights of Columbus..	53
Kansas City..	48	Temple Tours..	33
Kansas..	56	Gregory Tours..	73
Arkansas..	5	Bankers' special party..	30
Oklahoma..	19	National Association Stationers..	45
Nebraska..	74	International Engineers Congress	30
Omaha..	6	Gates Tours..	32
Texas..	53		
Total..	480	Total..	2,359

APPENDIX No. 4.

REPORT OF BUFFALO PARK.

The year's operations have been very successful indeed. The season having been early, every advantage was taken to prepare the land for seeding on the area broken the previous year, in addition to the acreage from which an excellent crop was produced last year. There were approximately some 470 acres planted with oats at winter quarters, and some 32 acres at the north end. The seed was selected from the grain grown on the farm the previous year; it was put through the fanning mill and then through the pickling machine, after which it was drilled in and the land well packed down with the new packer which was purchased. This careful prepara-



In Buffalo Park, Wainwright.

tion of the seed-bed and subsequent operations, together with an excellent rainy season, resulted in an exceptionally heavy crop, both of grain and straw. The yield was 30,222 bushels of high-class oats and some 240 bushels of wheat which had been sown experimentally on some 6 acres of stubble land. Approximately about 11,000 bushels of oats were shipped to the Rocky Mountains, Jasper, and Elk Island parks for their use; thus effecting a considerable saving in the cost of purchasing locally, and demonstrating that Buffalo park is capable of growing all the grain required for its own use, as also that of other parks, leaving a considerable surplus on hand for a year when crop conditions are not so favourable as those of the season of 1915.

The season was so wet it was fortunate that there was a good supply of hay on hand from last year; this, added to the quantity cut, wherever and whenever it was possible during the intervals of favourable weather, and to the extra heavy straw yield from the 470 acres, gave an assurance of plenty of feed for the increasing herd of buffalo.

The bison did not come into winter quarters until a later date than the previous year. They were in remarkably good condition, with the exception of a number of cripples, which had met with injuries in the constant fights for supremacy which take place among the buffalo. I am constrained again to advise that if the best results are to be obtained we must, as early as possible, divide the park with cross-fencing into areas suitable to form breeding, bull, and mixed stock pastures, together with a suitable corral for sorting out and handling the buffalo.

FENCING.

A new high fence of woven wire was erected to take the place of the old one which was too low to be of use in keeping the buffalo out of the winter pasture and feeding grounds. The old fencing was taken up and utilized for inclosing the horse pasture and a portion of the grain fields. A new fence of standard height of 7 feet was put up, thus shutting out the bison from the area around the stables and other buildings, and preventing them from breaking through the low fence surrounding the grain fields, or feeding whenever so inclined at the straw stacks.

The fencing around the main park was gone over, and where posts were decayed, the old ones were removed and new planted. A portion of the fencing on the west side near Rocky Ford cabin crossed a muskeg, and was a continual cause of trouble; this was rectified by removing the fence and building it on higher ground. Some experimental concrete posts were made and placed in position on the fence line, but their dimensions were such as to make them too heavy and costly for handling, consequently all were not utilized.

During the month of June some person or persons maliciously cut the main fence in several places with the object of letting the buffalo and deer escape from the park; the damage was detected and repairs made, but the guilty party was not found. The farmers on the west side made application for gates to be placed in the main north and west fence, in order to enable them to haul their produce to market by the shorter route through the park. Their request was granted.

THE GRANARY.

A new granary and implement shed was constructed, the upper story to be used as storage for some 5,000 bushels of oats, the floor as an implement shed, or should there be an excess of grain, such as there was this year the whole building can be utilized as a granary. The dimensions are 32 feet by 48 feet; there are six bins in the upper story, with an 8-foot driveway separating them; trap-doors in this latter for dropping the surplus grain to the lower floor, and spouts from the bins for sacking and loading. The lower floor is closed in permanently on three sides; the fourth or front side can be closed temporarily when grain is to be stored on the lower floor. This arrangement is very convenient, and the building is quite an important addition to those already at winter quarters.

TELEPHONES.

An up-to-date telephone system was installed to replace the old one. It was a most necessary addition to the park, and in the future the line should be extended from Alexander's gate to Rocky Ford by way of the proposed wardens' lodges at the gates on the north and west main fence lines.

ANIMALS IN THE PARK.

With regard to the animals in the park, the year has been, on the whole, a very successful one. There was an increase of 442 buffalo calves, with a decrease of 14, making a total of 2,077 buffalo now at Wainwright.

During the Christmas season, seven old bulls were killed to save the heads and robes. One head and robe were donated to the University of Saskatchewan. Last summer a buffalo cow was loaned to the city of Toronto; and two other buffalo have been loaned to the city of Guelph. These latter are now in the corrals being fed and tamed prior to shipping them to their destination.

The moose have thriven, and there are now sixteen. The elk are doing well, and show an increase of fourteen, and there is a large number of mule deer.



Elk in Buffalo Park, Wainwright, Alta.

The animals now in Buffalo park are as follows:—

Buffalo...	2,077
Moose...	16
Elk...	57
Mule deer...	100
Antelope...	3

The feathered game is very plentiful, and the sportsmen of the district have the Buffalo park sanctuary to thank for the good bags they have been able to secure outside the boundaries of the park.

The total number of visitors to the park during the year was approximately 1,623. The wet season had a good deal to do with the decreased patronage.

P. C. BARNARD-HERVEY.

APPENDIX No. 5.

REPORT OF THE SUPERINTENDENT OF ELK ISLAND PARK.

Few improvements were made this year, owing to war conditions.

The usual cleaning of the grounds took place in the spring, raking up the ground and hauling away the garbage, also fixing over the picnic grounds for the summer. These latter are very much appreciated by the public.

FIRE-GUARDS.

In the spring, before it became too dry, I took one man with me and rode around the park burning all long grass along the fence, as an extra precaution against fire.

I had the fire-guard ploughed during June and July. As we had a very wet season the grass and weeds grew very rapidly, so that it was necessary to disk it again in October. I think it will do now until next fall, when it will need a good ploughing to put it in shape for another year.

FENCING.

The fences required an amount of careful watching last year as the posts were in such poor condition. We set tamarack posts in at intervals to strengthen it, and I hope to have posts in this year to put in in first-class shape.

HAYING.

We started haying in the latter part of July, under very fine weather conditions, which prevailed throughout, and we got up about two hundred tons of very good hay. The hay land which we have reserved on the Cooking Lake forest reserve, is so very rough that I intend in the spring, before it gets too dry, to go with two or three men to burn it over, collect the rubbish and cut some bush which interferes with the working of the mower. By so doing, we shall be able to get much more and better hay.

ROADS.

Last year, only just enough road-work was done to keep the roads in passable condition, but they will require much more work this season.

ANIMALS.

The animals are in fine condition. The increase in the buffalo is not so large as last year, being twelve, with no loss. One aged cow in very poor condition was killed last fall, also one bull that was disabled by a wound in the hip. The heads and robes were shipped as directed.

The moose are doing splendidly, as this park is their natural habitat. I counted seven calves this year, making a total of thirty-nine moose in the park. While riding I saw three young elk, so they are increasing, and judging by the tracks I estimate about

ninety deer in the park. In a few years this park will be overstocked with these animals, and I should recommend that it be extended south into the Cooking Lake forest reserve. The summer pasture also is too small for the number of buffalo, and when we have to let them out into the larger park, a great many visitors who come on purpose to see the buffalo, are disappointed.

BUILDING LOTS.

Numerous inquiries have been received in past seasons concerning lots on which to build summer cottages. I should like to see lots to be leased for a number of years surveyed on the lake shore and some of the islands. I believe if this were done, Elk Island park would soon become one of the finest and most favoured summer resorts in northern Alberta. Many inquiries have also been made in regard to the completion of the Sandy Beach road.

VISITORS.

During eight months of this year we had a total of 1,121 visitors.

NUMBER OF ANIMALS.

The total number of animals in the park is as follows:—

Buffalo.. . . .	106
Moose.. . . .	39
Elk.. . . . (estimated)	50
Deer.. . . .	90

ARCHIBALD COXFORD.

APPENDIX No. 6.

REPORT OF THE SUPERINTENDENT OF WATERTON LAKES PARK.

DEVELOPMENT WORK.

I am pleased to report the completion of a new bridge over the Waterton river and one over the Crooked creek. The Waterton River bridge will enable people living in the different towns in southern Alberta to visit the park; hitherto they have had to ford the river, which was always considered dangerous, and deterred many; in fact I look forward to a large increase in the number of visitors to the park this coming season, owing to the construction of this bridge. From the bridge a graded road connecting with the old road was also constructed.

Other improvements included the widening of the cut leading to the Cameron falls, and gravelling the boulevard, which extends around the bay near the Narrows, making this one of the most beautiful driveways available.

As the superintendent is at present living in temporary quarters, I hope the department will undertake the erection of suitable buildings, during the coming year.

FIRE AND GAME PROTECTION.

The big game is increasing very rapidly in these mountains, especially a herd of elk which are to be seen almost any time near Turret mountain. This herd has increased greatly, and is now estimated at about 200 head. Deer, sheep, and goats are becoming very plentiful and tame. The bears are increasing very rapidly, and last fall caused considerable trouble among the nearby settlers, by killing some of their cattle.

There was only one infringement of the park regulations, and a conviction was secured. No fires were reported.

TOWNSITES.

A great number of inquiries for lots along the boulevard have been received, especially from people in Lethbridge and Macleod; I expect to see quite a number of cottages erected during the coming year.



In Waterton Lakes Park.

FISHING.

No better sport for the angler can be obtained anywhere in the Rockies than in the creeks throughout this park.

In the northern part of the south branch of the Castle river (formally the Southfork), the Beaver, Whitney, Gladstone, and Drywood creeks are abounding with trout, while the Waterton river and the Belly river in the south end of the park yield large catches daily.

The Waterton lakes, three picturesque bodies of water some 16 miles in length, the Cameron, Bertha, and Beaver, three smaller lakes of from $1\frac{1}{2}$ to 3 miles in length are well stocked with trout, and afford no end of sport to the fisherman.

GRAZING AND TIMBER.

Settlers adjoining the park have taken advantage of the grazing privileges which are obtained here, by grazing their stock under permit, which was reduced this year from \$1 per head per year, to 7 cents per head per month.

TOURISTS.

As it is situated a considerable distance from the railroad, the tourists coming to this park travel usually by motor or vehicle, and as last summer was very rainy and the roads in poor condition, the number of visitors was not as great as it might have been. Notwithstanding this, the attendance was very good, showing this park to be gaining in popularity as one of the most desirable pleasure resorts for fishing, boating, scenery, etc., to be met with anywhere.

Another new motor-boat, which carries 75 passengers, was launched the latter end of the season.

Waterton Lakes park was visited by several different parties from the United States Glacier National park during the past summer, who were delighted with the scenic features to be found in this park.

The number of tourists visiting the park this season was approximately 2,500.

ROBERT COOPER.

APPENDIX No. 7.

ANNUAL REPORT FOR JASPER PARK.

TRAILS.

The war still going on, and consequently economy having to be practised, the development work of the park has been somewhat handicapped; the only important work undertaken this season has been the making of new roads and trails where absolutely necessary, and the repairing of the old ones.

The Medicine Lake to Maligne trail was commenced in the month of June and work was carried on until September 18, when it was deemed advisable to close down for the season. This trail, or a portion of it, will, at a later date, be incorporated into the proposed main motor road from Jasper to Lake Louise.

Repairs to the following trails were made: Pyramid Lake was widened out in places and general repairs made. A new diversion was built crossing the Grand Trunk Pacific railway at the Cottonwood creek to give access to the cemetery and the old tote road to Swift-Holm.

The mileage of trails now in the park is approximately 143, of which about 30 miles have been completed this season. There are many old trails and tote roads which together amount to over three hundred miles.

FIRE PROTECTION.

There are now nine fire and game wardens and two temporary ones. These men have been assigned certain districts to patrol, and among their varied duties they must report any fire to headquarters and extinguish it with any help available. They are engaged in building trails when not otherwise employed.



Maligne Canyon, Jasper Park.

A new forest telephone system has been constructed which will enable wardens at outlying points to report a fire without loss of time. There are now about 80 miles of telephone lines completed, consisting of 17 miles from Yellowhead to Jasper, 38 miles from Jasper to Errington (Mile 70 C.N.R.), 25 miles under construction from Jasper to Medicine lake and connected by 4 miles to top of Fitzhugh mountain, and three-quarters of a mile from Pocahontas to Jasper Park collieries.

There was only one fire of any importance reported during the fire season; this took place in August, 1915, near Jack lake. It was quickly got under control and little damage was done.



Maligne Lake, Jasper Park.

GAME AND FISH.

Game is fairly plentiful; moose and deer abound in some districts, especially the latter. There are also mountain sheep and goats and a few bears. Amongst the smaller animals are cougar, lynx, coyotes, fox, beaver, marten, mink, weasels, porcupine and rabbits.

Birds are not as plentiful as one would wish. There is a scarcity of grouse and prairie chicken; ptarmigan are numerous on the higher ranges. Hawks and eagles are to be found, and owls, everywhere. Wild geese and ducks abound around the Rock Lake district.

VISITORS.

The Grand Trunk Railway Company advertised the park considerably this last summer and as at present there is no hotel at Jasper, a summer camp called "The Tented City" was opened on the borders of lake Beau Vert, under the management of Mr. Kenneth of the Edmonton Tent and Mattress Company. It proved a success, and over two hundred and sixty visitors registered at this camp alone, and availed them-

selves of this accommodation to explore Jasper park and vicinity. It is proposed to organize a similar camp on a larger scale this summer.

A number of improvements, such as waterworks, sewage, and a lighting system, are very desirable, but owing to the war it is impossible to enter upon these works as the



G. T. P. Tented City at Lac Beauvert, Jasper Park.

strictest economy has to be practised to make the appropriation cover the season's work.

P. C. BARNARD-HERVEY.

APPENDIX No. 8.

REPORT OF THE ACTING SUPERINTENDENT OF REVELSTOKE PARK.

My report for the year ending March 31, 1915, contained a description of the chief scenic attractions of Revelstoke park and surrounding country as well as a review of the progress of the work on the construction of the automobile road. It was found on examining this road early in the spring, that the water from the melting snow had done considerable damage to the roadbed, making it unfit in places for motor traffic. Several small rock and mud slides occurred, which had diverted the water from the side ditches and caused it to run along the road-bed. A few men were taken up to effect emergency repairs sufficient to permit traffic. Later a regular crew of three sectionmen were outfitted and placed on work to effect repairs, clear out side ditches and culverts on the portion of the road from station 225 to its junction with the Columbia River road. These sectionmen remained on this work until they had covered this whole

distance of approximately 6 miles. When these repairs were completed we were complimented on many occasions on the excellent condition of the drive.

With the opening day of June, our force of men and teams was assembled, the construction tools, tents, boarding outfit, etc., loaded in wagons and despatched to the camp grounds, some 6 or 7 miles from Revelstoke. On the portion of the road which had been constructed during 1914 large quantities of earth and loose rocks had fallen into the side ditches, blocking them up. The road was badly washed out as a consequence, and our first work consisted in getting the water channels clear as soon as possible between station 225 and station 304. Whatever suitable surfacing material was found while clearing the ditches was placed on the road-bed, and the coarse boulders raked off the side of the road.



Black Bear in Revelstoke Park.

A survey party, under Mr. J. M. Wardle, spent considerable time locating and making measurements of materials to be removed in construction work for the season. These measurements greatly aided in the preparing of the weekly progress reports covering the work. Locating and cross-sectioning has now been completed to a considerable distance beyond where the work has been opened up this season. A copy of the profile plan of the automobile road has been received at this office and is found to be of great value for reference. During the year 1914 the road from station 200 to station 304 was made passable for automobile traffic but was not fully completed; so that the work during the first three weeks of June consisted in completing this portion for automobile traffic. After this time, new road was opened up as quickly as possible until by the last of August we had a completed road to station 430. Having been instructed regarding the establishing of an internment camp in Revelstoke park, the construction force was reduced to about one-third its original number. Those retained were principally axemen, who were placed to work cutting right of way from station 430 onward. One week was spent at this work, and this force had cut through to station 542, a distance of approximately $2\frac{1}{2}$ miles.

SUMMARY.

Summary of work on road repairs and new road construction by hired labour for the season is as follows:—

	Miles.
Road repaired and raked, side ditches cleaned out by sectionmen approximately.. . . .	4.26
Road repaired and raked, side ditches and culverts cleared, with new surfacing on the greater part by road crew.. . . .	1.5
New road opened up for automobile traffic, surfaced, side ditched and raked.. . . .	2.39
Earth removed by day labour on road.. . . .cubic yards.	1,124.4
Loose rock removed by day labour on road.. . . .	4,848.5
Solid rock.. . . .	1,485.6
Round cedar cut and used on culverts, bridges and crib work .. . . .lineal feet.	18,245
Gravel hauled for surfacing.. . . .cubic yards.	484
Right-of-way cut out.. . . .miles.	2.51



New Motor Road to Revelstoke Park.

TRAILS.

The pony trail from Revelstoke to the summit was found to be in very bad condition even after the warden had put in considerable time making light repairs, so a small party of five men were placed at work under the warden, to give this trail a good overhauling. We were fortunate in securing some first-class men for this sort of work, and the progress made at cutting brush, renewing bridges, culverts, and corduroy, was most satisfactory. In a number of places diversions were made to escape the worst mud holes which occur so frequently. At the lower end of this trail, it was considered much cheaper to build a new portion to connect with the wagon road to the Ski-jump road, than to repair the existing trail. An easy grade was obtained and a much better and easier trail will be found on this new portion. In making my report for the chief forester for the year 1916-17, estimates were submitted for the opening up of new trails in this park, to facilitate the reaching of the outlying portions

in case of forest fires. Under present conditions there are no trails, which we could use to transport necessary supplies to fire fighters, on the eastern or northern reaches of this park. These trails could be built quite cheaply and would be of great value in case of fire. It is also advised that a cabin be constructed somewhere in the Silver Creek valley, as a stopping place for a warden when in that vicinity. This matter is also mentioned in my report.



Valley of the Columbia and Town of Revelstoke, from Revelstoke Motor Road.

FISH AND GAME.

A great many times during the past summer and fall, persons have remarked how numerous the game birds were becoming within the park. This is partly due to the strict watch kept by the warden for poachers and for dogs running at large. An article published in the local press, under a headline declaring that "it was not unlawful to hunt game in Revelstoke park," almost rendered unavailing all the good work accomplished in this line. This article was replied to in the next issue of the press, by citing several clauses of the park regulations, among which was the clause which states "it is unlawful for any person to have or carry unsealed firearms in any National park." This had the desired effect and most certainly stopped many from entering the park with the intention of killing game.

The appointment of another warden to look after the Silver Creek district, is in my opinion very important, because there are many hunters who go there each fall to hunt caribou, deer, and bear, and if these animals are not protected, it will only be a short time until they will be exterminated in Revelstoke park. The present warden cannot effectively patrol that portion of the park because there is no trail there at present, and it is some miles distant from Revelstoke.

The matter of stocking two lakes on the summit with game fish has been brought to my attention, and I understand a fisheries man visited the lakes and reported favourably on the matter. If this can be accomplished successfully, it will add materially to the attractions of Revelstoke park.

WINTER SPORTS.

Since furnishing my annual report for 1914-15, the possibilities of Revelstoke park being developed as a centre for all kinds of winter sports has been strongly impressed on the writer, first, on account of the success realized from these sports last season, and secondly on account of the further success anticipated owing to the construction of a new ski jump, which is the peer, if not the superior, of any in the world.



H. R. H. the Duke of Connaught Planting Post at Station 500, Revelstoke Motor Road.

H. R. H. the Duke of Connaught is seen with spade in hand. To the left of the Duke in the picture, is H. R. H. the Duchess of Connaught, and next to her stands H. R. H. Princess Patricia.

Heretofore, mount Revelstoke, its beautiful Alpine park, its unique and wonderful auto road, have been described, praised, and admired from the summer standpoint only. But now, and with suddenness, a new argument—a new meaning—rich with reason and promise of reward, has been presented for the prosecution and development of the plans to exploit this truly magnificent “Garden of the Gods.” It came about by the formation, in Revelstoke, in mid-December, of the Revelstoke Ski Club. Starting then with but twenty-two members it now has over one hundred. On February 9, 1915, the club held its first tournament on the slopes of mount Revelstoke, and about two thousand people from various points of British Columbia and Alberta witnessed the thrilling leaps and runs of contestants. One of the most interested spectators there was Mr. Grant Hall, vice-president of the Canadian Pacific Railway. So interested was he that he took away—by request—the moving picture films arranged for by the local Board of Trade, to develop at his own expense, and promised that, should they turn out well, he would have them placed with the company’s exhibit at the Panama exhibition where views of Revelstoke’s Alpine park will also be shown. The new viewpoint had caught him also. He, too, had visions of a winter playground—equal to anything in Switzerland—and the slogan “See your own country first,” is the present watchword of the railways throughout Canada and the United States.

Another interested visitor, and from another angle entirely, was Mr. Thorlief Iverson, President of the Western Canada Ski Association, who kindly attended to act as judge of sports. So much impressed was he with the natural situation and advantages of Revelstoke park for the cultivation of winter sports, that he remained another day to explore mount Revelstoke. He found and located a jumping site which in his opinion equals the famous Blumendal hill in Norway for exposure, angle incline, approach and speed finish; and he stated before the Board of Trade, that in his opinion, with expert jumpers, a world's record should be made on it. He made an eloquent plea for the development of the hill, the progress of the sport, the business value of the cultivation of the natural advantages and scenic beauties so prodigally present in the mountains both winter and summer; and he left, too, with a promise to do all he could to advertise the attractions—especially the winter ones—of the place.



Willow Grouse in Revelstoke Park.

Nest was found to contain 16 eggs.

This new value of the Alpine park, and the necessity of developing and making it accessible for a winter as well as a summer playground for this continent has taken hold, and a new and most popular and cogent reason now exists for prosecuting the plans of the Government with regard to the automobile road and the park generally. Already inquiries have come in from as far as Montreal, asking if the opportunity exists for ski-ing tours; and representatives of the sport in several places have expressed their intention of coming to Revelstoke for its enjoyment and competition next winter.

Another possibility, one equally unique and exciting with the possibility of golfing above the clouds, is presented or afforded by mount Revelstoke. At such an elevation where there are but two seasons—winter and summer—snow country is good for sports until the end of May. In Switzerland, at altitudes of over 3,000 feet, April is an excellent ski-ing month. On mount Revelstoke, where there is no danger of avalanches at the elevation of 6,000 feet, ski-ing, tobogganning, bob-sledding and snow-shoeing can be had till the end of May; in fact, contests between local parties actually took place on mount Revelstoke May 24, 1915, at which a jump of 104 feet is recorded as having been made from a natural jump. What an attraction to the winter sports-



Photo by Grand Trunk Pacific Railway.

Mt. Edith Cavell, Jasper Park.

men of a continent! And then, a month later, fields of flowers, emerald lakes, and golfing above the clouds.

The more one studies at first hand, with experience and trustworthy evidence to guide one, the more enthusiastic one becomes over the attractive possibilities of mount Revelstoke and its park. The joy and exhilaration of the automobile drive, the charm and variety of the scenic views; the lovely contrasts of the park tarns and lakes; balsam trees and flower masses of vivid colouring; open meadow plateaus and rock ridges and glacier fronts; snowpeaks and green forests; and the great pine stretches and slopes of winter's snow, filled with the tonic of life in all seasons; no wonder the trapper and the prospector, the summer and winter genii of the mountain summits, call it "God's country."

F. E. MAUNDER.

REPORT OF ST. LAWRENCE ISLANDS PARKS.

The St. Lawrence Islands parks, consisting of twelve islands and a small portion of the mainland situated on the St. Lawrence river, between Brockville and a few miles west of Gananoque, are chiefly used by day visitors and campers.

These islands are marked by large sign-boards on which is written: Dominion Public Lands, with the respective number of the island, so that they may be more readily distinguished by the public.

All the large and suitable islands comprising the Thousand islands in the St. Lawrence river, except those reserved by the Government for park purposes, have been taken up by private individuals, and are therefore not open to the public. The Dominion Park islands, on the contrary, are set apart for the free use of the people, and many of them are equipped with all the necessary accessories for picnic parties, campers, or day visitors. This equipment consists of wharves for skiffs and launches, pavilions, camp-stoves, tables, benches, etc. These island parks are becoming more popular every year, as they afford the general public the opportunity to enjoy a pleasant rest, together with the beautiful scenery of the St. Lawrence islands.

The work undertaken in connection with these islands during the past year, with the exception of Gordon island, consisted chiefly in small repairs to the equipment. All this was done by the caretakers.

The wharf on Gordon island was seriously damaged by ice, and it was therefore necessary to rebuild a portion of it and to put a new cover on the balance. Considerable repairs were also made to the pavilion on this island, and a new flag-pole erected.

A list showing the names of the islands, their size, location, and the improvements on each, together with the names of the different caretakers follows:—

Aubrey island.—Dominion Public Lands No. 9; approximate area, 15 acres; 2½ miles west of Gananoque; improvements—1 launch wharf, 1 pavilion, 2 stoves, 2 out-closets, 4 tables, 2 garbage cans, 8 benches (marine light); caretaker, J. A. Acton. Gananoque.

Mermaid island.—Close to Aubrey; area, 4 acres; caretaker, J. A. Acton.

Beau Rivage.—Dominion Lands No. 1; approximate area, 10 to 14 acres; 2 miles west of Gananoque; improvements—steamboat and skiff wharves, 1 pavilion, 4 stoves, 2 out-closets, 4 tables, 14 benches, 2 garbage cans; caretaker, A. E. Meggs, Gananoque.

Gordon island.—Dominion Public Lands, No. 2; 16 to 20 acres area; 2 miles south-east of Gananoque; improvements—steamboat wharf and skiff wharf, 1 pavilion, 3

stoves, 2 out-closets, 4 tables, 10 benches, 2 garbage cans; caretaker, Thomas Glover, Gananoque.

Camelot island.—Area, 25 acres; 3 miles east of Gananoque; 1 stove; caretaker, Thomas Glover.

Endymion island.—Ten acres area; 3 miles southeast of Gananoque; 1 stove; caretaker, Thomas Glover.

Georgina island.—Dominion Public Lands No. 3; area, 25 acres; location, 9½ miles east of Gananoque; improvements, on west end,—steamboat and skiff wharves, 1 pavilion, 2 stoves, 2 out-closets, 4 tables, 12 benches, 2 garbage cans; on east end, skiff wharf, 3 stoves, 2 closets, 4 tables, 14 benches, 2 garbage cans; caretaker, J. C. Wallace, Ivy Lea.

Constance island.—Close to Georgina; area, 7 acres; 1 stove; caretaker, J. C. Wallace.

Grenadier island.—Dominion Public Lands No. 5; area, 5.1 acres; location near Rockport; improvements, west end of island—steamboat wharf, 1 pavilion, 2 stoves, 2 closets, 4 tables, 12 benches, 2 garbage cans; caretaker, Delbert Root, Rockport.

Mallorytown Landing.—Dominion Public Lands No. 6; part of mainland, 12 miles west of Brockville; improvements—1 pavilion, 1 stove, 2 closets, 2 tables, 7 benches, 1 garbage can; caretaker, R. J. Haffie.

Adelaide Island.—Mile and a half south of Mallorytown Landing; caretaker, R. J. Haffie, Mallorytown.

Stovin Island.—Dominion Public Lands No. 7; area, 5 acres; 2½ miles west of Brockville; improvements—steamboat and skiff wharves, 2 pavilions, 4 closets, 6 tables, 16 benches, 6 garbage cans, 5 stoves; caretakers, J. E. Timleck, Brockville.

METEOROLOGICAL TABLES.

MAXIMUM and Minimum Temperatures and the General State of the Weather between
April 1, 1915, and March 31, 1916, at Banff, Alta.

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1915			
April 1.....	51.3	29.1	Cloudy; gale, S.W.
" 2.....	58.5	39.8	Fair; strong warm wind, S.W.; light rain.
" 3.....	54.8	39.5	Fair; strong wind, S.W.; snow gone.
" 4.....	53.0	31.2	Fair.
" 5.....	54.2	24.4	Fair; very fine day.
" 6.....	53.0	22.2	Fair; very fine day.
" 7.....	54.0	24.2	Fair; rain.
" 8.....	42.3	31.7	Fair; light snow.
" 9.....	47.2	32.2	Cloudy; gale, S.W.
" 10.....	56.3	24.3	Fair; very fine warm-like day.
" 11.....	60.2	29.3	Fair; very fine day.
" 12.....	59.9	30.3	Fair; very fine day.
" 13.....	51.9	30.2	Cloudy; roads in splendid shape.
" 14.....	59.2	28.3	Fair; perfect day.
" 15.....	66.1	25.7	Fair; perfect day.
" 16.....	69.3	28.0	Fair; perfect day.
" 17.....	68.3	30.2	Fair; very fine day.
" 18.....	67.8	34.5	Fair; strong S.W. wind afternoon; very fine day.
" 19.....	61.3	29.5	Fair.
" 20.....	60.3	36.2	Cloudy; strong wind; rain; snowstorm.
" 21.....	40.2	30.3	Cloudy; chilly day; snow gone and roads dry again, afternoon.
" 22.....	53.1	18.9	Fair; very fine day, but cool.
" 23.....	61.1	21.0	Fair; very fine day.
" 24.....	55.3	39.0	Cloudy; light rain.
" 25.....	60.3	32.3	Fair; light rainshower.
" 26.....	60.2	39.2	Cloudy; gale, W., part of afternoon.
" 27.....	54.0	32.9	Cloudy; gale, S.W.; chilly.
" 28.....	66.3	32.0	Fair; very fine day.
" 29.....	68.2	29.8	Cloudy; rain and thro. midt., thunderstorm.
" 30.....	41.5	35.8	Overcast; rain and thro. midt.; fresh snow on high mountains.
May 1.....	42.6	34.4	Cloudy; rain.
" 2.....	51.0	35.0	Cloudy; rain.
" 3.....	55.1	28.2	Fair.
" 4.....	46.3	37.4	Overcast; rain.
" 5.....	55.3	38.7	Cloudy; rain.
" 6.....	63.6	30.3	Fair; rain; thunderstorm at night.
" 7.....	69.2	36.8	Fair; very fine day.
" 8.....	70.3	39.8	Fair; very fine day.
" 9.....	69.2	31.9	Fair; light rain at night; very fine day.
" 10.....	57.8	45.0	Fair; light showers off and on early a.m.
" 11.....	58.4	40.2	Fair; cool.
" 12.....	63.0	29.2	Fair.
" 13.....	44.3	39.2	Overcast; heavy rain.
" 14.....	42.7	34.0	Overcast; rain; snow, evening.
" 15.....	40.2	32.1	Overcast; rain; light snow early a.m.
" 16.....	45.8	31.8	Cloudy; light rain.
" 17.....	45.2	34.5	Overcast.
" 18.....	45.9	37.0	Cloudy; rain.
" 19.....	48.5	33.6	Cloudy.
" 20.....	56.9	34.2	Cloudy; trace of rain.
" 21.....	61.0	34.3	Cloudy.
" 22.....	53.9	40.7	Cloudy; light rain.
" 23.....	58.3	33.2	Cloudy; rain.
" 24.....	53.7	38.0	Cloudy; rain; chilly.
" 25.....	58.8	37.7	Cloudy; rain.
" 26.....	57.8	38.1	Cloudy; rain.
" 27.....	65.3	45.5	Fair; windy.
" 28.....	64.5	51.0	Fair; rain early a.m.
" 29.....	61.8	38.9	Fair; rain.
" 30.....	59.8	31.0	Fair.
" 31.....	64.5	37.0	Cloudy.



Photo by G. T. P. R.

Valley of the Athabaska, Mt. Hardisty in Centre, Jasper Park.

METEOROLOGICAL TABLES—*Continued.*MAXIMUM and Minimum Temperature and the General State of the Weather, etc—*Con.*

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1915			
June 1.....	60.2	40.2	Cloudy; rain.
" 2.....	51.5	42.2	Cloudy; rain; raw day.
" 3.....	61.0	43.0	Cloudy.
" 4.....	69.1	33.1	Fair; rain.
" 5.....	55.5	38.9	Cloudy; rain.
" 6.....	59.0	32.0	Cloudy; rain early a.m.
" 7.....	55.5	39.0	Cloudy; rain.
" 8.....	58.5	36.0	Cloudy; rain.
" 9.....	53.2	32.5	Cloudy; rain at night.
" 10.....	55.0	38.0	Fair; rain and hail.
" 11.....	57.5	35.9	Cloudy; light rain.
" 12.....	62.7	30.9	Fair; rain and hailstorm.
" 13.....	61.0	35.7	Cloudy; rain.
" 14.....	63.9	33.4	Fair; exceptionally heavy rain early a.m. with snow.
" 15.....	53.4	43.7	Cloudy; rain.
" 16.....	63.8	41.5	Cloudy; rain.
" 17.....	51.0	38.9	Cloudy; exceptionally heavy rain early a.m.
" 18.....	56.3	37.9	Cloudy; rain.
" 19.....	52.4	39.3	Overcast; rain.
" 20.....	58.3	39.8	Cloudy; rain.
" 21.....	66.0	39.0	Fair.
" 22.....	74.2	35.8	Fair.
" 23.....	75.2	38.2	Fair; very fine.
" 24.....	75.6	40.4	Fair; very fine; thunder and lightning, no rain.
" 25.....	54.3	48.0	Cloudy; rain; thunderstorm; very heavy downpour during night.
" 26.....	42.2	35.0	Overcast; very heavy rain; thunder storm; Bow river very high and very muddy, and Spray river very high and very clayey; trains blocked east and west.
" 27.....	64.8	37.3	Fair; rain early a.m.
" 28.....	66.1	35.8	Fair.
" 29.....	72.0	37.0	Fair; very fine.
" 30.....	73.0	44.6	Fair; very fine; rain during night.
July 1.....	58.8	43.4	Cloudy; rain.
" 2.....	62.0	35.3	Fair; rain.
" 3.....	68.2	41.7	Fair; very fine.
" 4.....	74.3	41.3	Fair; very fine; thunderstorm.
" 5.....	73.2	42.7	Fair; very heavy rain; thunderstorm hail.
" 6.....	71.1	43.2	Fair; rain; thunderstorm.
" 7.....	68.7	48.9	Cloudy; rain.
" 8.....	67.3	46.2	Fair.
" 9.....	63.3	39.7	Cloudy; rain; thunderstorm.
" 10.....	57.0	40.8	Cloudy; rain; gale S.W.
" 11.....	55.3	40.2	Cloudy.
" 12.....	66.9	42.2	Cloudy; rain; thunder.
" 13.....	53.5	44.5	Cloudy; rain; very heavy rain during night.
" 14.....	49.2	36.2	Cloudy; heavy rain; chilly day.
" 15.....	56.3	39.3	Cloudy; rain.
" 16.....	61.0	43.6	Cloudy; rain.
" 17.....	56.5	41.7	Cloudy; rain.
" 18.....	66.1	44.0	Fair; rain.
" 19.....	72.9	39.2	Fair; rain.
" 20.....	75.0	40.5	Fair; very fine.
" 21.....	76.2	43.0	Fair; rain; thunderstorm.
" 22.....	79.2	45.0	Fair; very fine.
" 23.....	72.0	44.0	Fair.
" 24.....	69.2	43.0	Cloudy; thunderstorm to midnight.
" 25.....	68.5	46.0	Cloudy; thunder.
" 26.....	61.4	41.0	Cloudy; rain.
" 27.....	60.0	44.7	Cloudy; rain.
" 28.....	59.0	49.2	Cloudy; rain.
" 29.....	66.2	49.0	Cloudy; rain; very fine afternoon.
" 30.....	75.3	49.8	Fair; light rain; thunderstorm and threatening looking.
" 31.....	66.1	45.6	Cloudy; rain.

METEOROLOGICAL TABLES—*Continued.*MAXIMUM and Minimum Temperature and the General State of the Weather, etc—*Con.*

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1915			
Aug. 1.....	76.2	45.0	Fair; very fine day; Zodaical light.
" 2.....	77.8	46.7	Fair; very fine day.
" 3.....	73.6	46.5	Cloudy; rain.
" 4.....	73.8	41.0	Fair; very fine day.
" 5.....	78.2	38.5	Fair; perfect day.
" 6.....	83.7	40.1	Fair; perfect day.
" 7.....	81.3	45.3	Fair; very fine day; thunderstorm during night.
" 8.....	76.7	44.8	Fair; very fine.
" 9.....	81.2	42.0	Fair; very fine; vivid lightning moving under aurora.
" 10.....	81.9	42.0	Fair; perfect day.
" 11.....	84.3	40.6	Fair; perfect day.
" 12.....	75.4	48.8	Fair; rain; thunderstorm; very fine day.
" 13.....	78.0	43.8	Fair; very fine day.
" 14.....	81.0	43.9	Fair; rain during night; thunderstorm, very fine day.
" 15.....	79.1	49.9	Fair; thunder.
" 16.....	78.3	40.2	Fair; very fine day; large solar halo.
" 17.....	72.2	43.8	Fair; rain; gale S.W.; thunderstorm.
" 18.....	69.1	44.8	Fair; rain; thunderstorm.
" 19.....	60.3	45.1	Overcast; rain; cool.
" 20.....	59.7	50.1	Cloudy.
" 21.....	77.2	43.0	Fair; perfect day.
" 22.....	70.3	45.2	Fair; thunderstorm, hail; smoke from British Columbia forest fires.
" 23.....	78.6	40.8	Fair; perfect day.
" 24.....	72.7	41.3	Fair; very fine; rather smoky; thunder and lightning.
" 25.....	78.8	47.2	Fair; very fine.
" 26.....	78.8	40.9	Fair; light rain; very fine; meteor detonates 11 p.m., loud report.
" 27.....	76.1	46.0	Fair; very fine day and night.
" 28.....	81.3	41.3	Fair; perfect day.
" 29.....	84.0	39.4	Fair; perfect day.
" 30.....	81.0	39.2	Fair; very fine morning; rain.
" 31.....	64.0	47.8	Cloudy.
Sept. 1.....	64.0	39.3	Fair; rain, and heavy through midnight.
" 2.....	61.2	45.2	Cloudy; rain a.m.; fine afternoon.
" 3.....	70.3	34.9	Fair; perfect day.
" 4.....	71.0	40.8	Fair; very fine.
" 5.....	73.0	37.9	Fair; very fine.
" 6.....	60.0	47.4	Cloudy; strong S.E. wind later afternoon.
" 7.....	58.0	38.8	Cloudy.
" 8.....	50.2	32.2	Cloudy; heavy rain during night.
" 9.....	45.2	35.9	Cloudy; light rain.
" 10.....	44.8	31.7	Cloudy.
" 11.....	48.3	26.7	Cloudy; rain changing to snow during night.
" 12.....	31.1	22.2	Cloudy; cold; snow on ground and slushy.
" 13.....	34.3	18.2	Cloudy; chilly.
" 14.....	48.0	32.3	Cloudy; chilly wind strong afternoon S.W.
" 15.....	58.1	38.8	Cloudy; light rain; strong wind afternoon, S.W.
" 16.....	60.1	40.2	Fair; strong S.W. wind.
" 17.....	62.2	41.3	Fair; strong wind S.W. afternoon.
" 18.....	62.1	35.8	Cloudy; rain; fall tints.
" 19.....	51.2	32.4	Fair; rain heavy early a.m. and snow.
" 20.....	56.5	27.3	Fair; very fine day.
" 21.....	64.0	29.8	Fair; very fine day; very large solar halo.
" 22.....	57.0	38.0	Fair; light rain.
" 23.....	42.1	34.7	Cloudy; rain.
" 24.....	54.1	35.8	Fair.
" 25.....	62.4	28.6	Fair; perfect day.
" 26.....	56.1	28.7	Cloudy.
" 27.....	51.2	43.8	Cloudy; rain thro. midt.
" 28.....	56.0	39.2	Fair.
" 29.....	62.2	29.8	Fair; very fine day.
" 30.....	55.8	44.0	Cloudy; rain evening and thro. midt.

METEOROLOGICAL TABLES—*Continued.*MAXIMUM and Minimum Temperature and the General State of the Weather, etc—*Con.*

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1915			
Oct. 1.....	52.1	41.8	Cloudy; trace of rain.
" 2.....	49.3	35.5	Cloudy; rain.
" 3.....	50.0	33.2	Cloudy; rain.
" 4.....	47.3	31.0	Fair; rain early a.m.; solar corona.
" 5.....	45.2	34.0	Fair; rain early a.m.; fresh snow on mountains low down.
" 6.....	46.1	27.0	Fair; very fine day.
" 7.....	46.1	20.8	Cloudy; solar halo.
" 8.....	58.0	29.0	Fair; strong wind S.W.; very fine day.
" 9.....	51.9	38.9	Fair; strong wind S.W.; very fine day.
" 10.....	43.3	29.2	Fair; snow early a.m.
" 11.....	42.2	34.8	Cloudy; strong wind afternoon.
" 12.....	44.3	36.4	Cloudy; rain.
" 13.....	48.2	36.4	Cloudy.
" 14.....	48.2	34.3	Fair; rain; gale early morning, S.W., very fine day.
" 15.....	54.0	28.3	Fair; perfect day.
" 16.....	59.3	29.9	Fair; strong wind afternoon; very fine day.
" 17.....	55.1	38.4	Cloudy.
" 18.....	49.3	40.8	Cloudy; gale early a.m., S.W.; rain.
" 19.....	38.2	27.0	Cloudy; rain early a.m. and snow; strong S.W. wind.
" 20.....	50.0	33.0	Cloudy; light snow early a.m., strong S.W. wind.
" 21.....	52.3	36.8	Cloudy.
" 22.....	56.8	37.8	Cloudy; large solar halo and corona; very fine day.
" 23.....	58.4	25.2	Fair; rain; very fine to about 4 p.m.
" 24.....	41.1	30.2	Fair.
" 25.....	47.0	31.6	Fair.
" 26.....	48.8	39.0	Cloudy; rain at night; strong S.W. wind.
" 27.....	46.1	35.3	Cloudy; rain early a.m.; gale S.W.
" 28.....	47.5	40.1	Cloudy; rain early a.m.; gale S.W.
" 29.....	47.0	39.8	Cloudy.
" 30.....	36.4	32.5	Cloudy; rain early a.m. and light snow early a.m.; strong S.W. wind.
" 31.....	41.4	29.9	Cloudy; rain snow.
Nov. 1.....	38.7	31.0	Fair;
" 2.....	31.1	21.3	Cloudy; light snow.
" 3.....	41.8	27.7	Fair; very fine day.
" 4.....	40.3	28.1	Cloudy; light rain thro. midt.; strong S.W. wind.
" 5.....	37.7	32.4	Fair.
" 6.....	31.3	11.3	Fair; very fine day.
" 7.....	29.3	7.9	Fair.
" 8.....	27.2	8.0	Fair; snow thro. midt.
" 9.....	21.3	17.5	Overcast; snow.
" 10.....	24.2	4.9	Fair.
" 11.....	23.8	4.3	Fair.
" 12.....	20.3	- 5.2	Fair.
" 13.....	25.1	4.1	Fair; strong S.W. wind.
" 14.....	29.2	18.3	Cloudy; strong S.W. wind.
" 15.....	30.9	16.5	Cloudy; very light snow fall.
" 16.....	31.8	19.0	Fair.
" 17.....	34.8	25.9	Cloudy; snow.
" 18.....	32.0	26.9	Cloudy; a few sleighs out.
" 19.....	30.7	24.3	Fair; light snow early a.m.
" 20.....	27.9	15.4	Fair; very fine day; ice on Bow river about four inches.
" 21.....	23.1	4.8	Cloudy; light snow; gale S.W. wind, cold.
" 22.....	32.0	21.0	Cloudy.
" 23.....	34.3	24.5	Cloudy.
" 24.....	28.4	13.7	Fair; light snow early a.m.
" 25.....	30.3	19.2	Cloudy.
" 26.....	33.2	26.6	Fair; strong wind S.W.; wind chilly.
" 27.....	25.0	12.3	Fair, cold wind.
" 28.....	16.1	- 7.9	Fair; gale thro. midt.
" 29.....	27.9	13.3	Fair; strong S.W. wind; snowflurries.
" 30.....	26.3	12.7	Fair; very fine day; ice on Bow river about 7 inches.

METEOROLOGICAL TABLES—*Continued.*MAXIMUM and Minimum Temperature and the General State of the Weather, etc—*Con.*

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1915			
Dec. 1.....	21.0	6.0	Fair; strong gale.
" 2.....	29.7	10.1	Fair; fresh gale.
" 3.....	29.3	15.9	Fair; very fine day.
" 4.....	41.5	27.3	Cloudy; rain; ice on Bow river about 8 inches.
" 5.....	33.0	25.3	Cloudy.
" 6.....	34.8	26.5	Fair; light snow.
" 7.....	28.2	21.3	Cloudy; snow thro. midt.
" 8.....	34.9	22.6	Overcast; rain and snow; sleighing.
" 9.....	27.1	19.3	Cloudy; snow.
" 10.....	12.2	- 7.3	Fair; solar halo; sleighing now good.
" 11.....	21.8	9.9	Cloudy.
" 12.....	22.1	13.7	Fair; very fine day.
" 13.....	22.1	- 0.5	Cloudy.
" 14.....	18.3	5.6	Fair; very fine day.
" 15.....	19.2	0.2	Cloudy.
" 16.....	21.9	- 2.1	Cloudy.
" 17.....	23.3	7.3	Fair; very fine day; ice on Bow river 12 inches; Lake Minnewanka frozen over.
" 18.....	23.0	11.9	Fair; very fine.
" 19.....	22.0	14.4	Fair.
" 20.....	31.0	14.7	Cloudy; strong west wind.
" 21.....	31.5	26.0	Cloudy; snow.
" 22.....	29.0	16.2	Cloudy; snow early a.m.
" 23.....	23.2	9.2	Fair.
" 24.....	24.8	8.9	Overcast; moderate gale, S.W.; light snow.
" 25.....	21.3	15.2	Cloudy; calm; mild; Bow river ice about 13 inches.
" 26.....	18.0	- 9.3	Fair.
" 27.....	24.2	1.2	Cloudy; very light snow; strong gale S.W.; snow drifting.
" 28.....	22.0	10.8	Cloudy; moderate gale S.W.; snow drifting.
" 29.....	8.8	- 7.8	Fair.
" 30.....	9.8	-19.2	Cloudy; strong S.W. wind.
" 31.....	8.2	- 2.2	Fair; ice on Bow river about 15 inches; about 8 inches snow on ground.
1916.			
Jan. 1.....	9.2	- 8.8	Fair.
" 2.....	7.4	-17.5	Fair.
" 3.....	0.6	-22.3	Cloudy; snow.
" 4.....	- 4.0	-25.7	Fair.
" 5.....	6.3	-22.6	Fair; strong W. wind.
" 6.....	12.8	1.8	Cloudy; strong W. wind.
" 7.....	11.3	- 9.0	Fair; light snow.
" 8.....	9.9	- 3.3	Cloudy; snow during night. Bow river ice about 18 inches.
" 9.....	- 8.9	-15.5	Cloudy; snow; moderate gale N.E. snow drifting.
" 10.....	-22.8	-30.6	Fair; strong N.E. wind; snow drifting.
" 11.....	-10.0	-45.7	Fair; calm; excessively cold.
" 12.....	-17.7	-38.9	Fair; Bow river ice as cut 24 inches.
" 13.....	-14.1	-35.6	Fair.
" 14.....	-11.0	-37.0	Fair.
" 15.....	-14.7	-41.0	Fair; Bow river ice 30 inches.
" 16.....	13.2	-29.0	Cloudy.
" 17.....	11.8	-15.0	Fair.
" 18.....	17.8	-13.1	Fair.
" 19.....	19.1	- 6.1	Fair; strong S.W. wind.
" 20.....	18.6	5.5	Cloudy; snow.
" 21.....	-13.7	-18.5	Overcast; snow thro. midt.; wind to N.E.
" 22.....	- 7.0	-23.4	Overcast; heavy snowfall; ice on Bow river 31 inches.
" 23.....	-23.5	-31.8	Overcast; heavy snowfall; strong wind N.E. blizzard; snow drifting ing very much; very cold; 33 inches snow on ground.
" 24.....	-18.9	-46.5	Fair; very cold but calm.
" 25.....	-19.4	-35.5	Cloudy; strong east wind; snow drifting; solar halo; very blustery and very cold.
" 26.....	-20.1	-38.6	Fair; clear sky; very cold.

METEOROLOGICAL TABLES—*Continued.*MAXIMUM and Minimum Temperature and the General State of the Weather, etc—*Con.*

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1916			
Jan. 27.....	-21.3	-44.0	Fair; very misty; stormy during night.
" 28.....	-13.2	-29.5	Cloudy; stormy early a.m.; cold wind.
" 29.....	-13.0	-43.8	Fair; light snow early a.m.; wind to west again.
" 30.....	0.2	-33.4	Cloudy.
" 31.....	2.7	-27.3	Fair.
Feb. 1.....	0.2	-24.0	Fair; very fine day.
" 2.....	- 0.8	-37.0	Fair; very fine.
" 3.....	- 2.1	-34.0	Fair; very fine day; ice Bow river 36 inches.
" 4.....	1.3	-10.1	Cloudy; Bow river completely frozen over; wind N.E.
" 5.....	10.8	-25.9	Fair.
" 6.....	5.1	-23.3	Fair.
" 7.....	9.3	- 6.5	Cloudy; snow.
" 8.....	12.0	- 4.2	Fair; light snow.
" 9.....	- 4.0	-11.0	Cloudy; light snow.
" 10.....	2.9	-15.1	Cloudy; snow.
" 11.....	9.8	-15.5	Cloudy; ice as cut 38 inches Bow river.
" 12.....	32.1	- 4.0	Fair; wind S.W. chinook commences during night.
" 13.....	39.0	24.0	Fair; wind S.W., strong; chinooking; ice on Bow river 39 to 40 inches.
" 14.....	46.1	30.0	Cloudy; wind S.W., gale, chinook; snow going fast.
" 15.....	48.2	40.8	Fair; strong S.W. wind during night; snow going fast.
" 16.....	46.2	34.8	Fair; light rain early a.m.; sleighing bad; snow going fast; very sloppy walking.
" 17.....	42.8	26.0	Fair; very fine day; sloppy walking.
" 18.....	45.5	17.0	Fair; fine bright day.
" 19.....	46.3	24.3	Fair; very fine day; ice on Bow 30 inches; snow on ground about 8 inches.
" 20.....	45.6	17.7	Fair; very fine day.
" 21.....	41.3	14.7	Fair; very fine day; ice Lake Minnewanka 24 inches.
" 22.....	43.1	15.5	Fair; very slippery walking for some days past.
" 23.....	39.7	27.7	Fair.
" 24.....	39.8	25.3	Fair; Bow Falls mostly open.
" 25.....	37.1	15.3	Cloudy.
" 26.....	30.8	23.2	Cloudy; snow; ice Bow river 32 to 34 inches.
" 27.....	30.0	- 2.3	Cloudy.
" 28.....	28.0	15.9	Cloudy; light snow.
" 29.....	11.4	- 2.8	Fair; cold N.E. wind.
Mar. 1.....	6.8	-22.4	Fair; strong N.E. wind.
" 2.....	5.0	-13.2	Fair.
" 3.....	23.7	- 8.9	Cloudy; snow.
" 4.....	26.2	7.2	Fair; ice Bow river about 36 inches.
" 5.....	27.7	- 7.4	Cloudy.
" 6.....	29.0	7.3	Fair; light snow.
" 7.....	29.5	13.7	Cloudy; a gale S.W. light snow.
" 8.....	42.5	26.0	Cloudy; moderate gale S.W.; trace of rain.
" 9.....	46.3	35.1	Cloudy; strong gale S.W.; rain.
" 10.....	46.1	37.8	Cloudy; no sleighing; moderate gale S.W.; light rain.
" 11.....	47.2	36.3	Cloudy; rain; sleighing on sheltered roads.
" 12.....	37.3	22.9	Cloudy; strong N.E. wind a.m. with heavy snowfall.
" 13.....	33.1	23.6	Cloudy; snow drifting yesterday; sleighing good again.
" 14.....	30.3	- 3.9	Fair; solar halo and lunar halo.
" 15.....	40.3	13.2	Cloudy; light snow early a.m.
" 16.....	42.3	14.2	Cloudy; light snow early a.m.
" 17.....	40.0	20.8	Fair; light snow early a.m.
" 18.....	43.2	9.7	Fair; Bow river ice unsafe in places.
" 19.....	45.0	25.3	Cloudy; sleighing poor yesterday.
" 20.....	50.8	29.5	Western robin and four mountain blue birds, males.
" 21.....	38.3	31.3	Cloudy; fine day; thawing much.
" 22.....	40.3	28.8	Fair; light snow; strong gale Sulphur Mountain top.
" 23.....	39.2	16.2	Fair; fine day; no sleighing.
" 24.....	37.9	13.8	Fair; snow.

METEOROLOGICAL TABLES—*Concluded.*MAXIMUM and Minimum Temperature and the General State of the Weather, etc—*Con.*

Date.	THERMOMETER READINGS		Weather, etc.
	Maximum for day.	Minimum for day.	
1916.			
Mar. 25.....	38.0	25.5	Fair.
" 26.....	42.0	27.0	Cloudy; snowstorm evening.
" 27.....	40.3	28.2	Cloudy.
" 28.....	39.8	20.3	Cloudy; snowstorm evening.
" 29.....	39.2	14.9	Fair; very bright day.
" 30.....	43.8	20.0	Cloudy; Bow river nearly open to boat house.
" 31.....	47.9	33.3	Cloudy; light rain; snow during night, snow on ground 0 to 3 inches; main road about free of snow.

NORMAN B. SANSON,

Meteorological Observer.

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National Parks Branch

DEPARTMENT OF THE INTERIOR, CANADA
Hon. ARTHUR MEIGHEN, Minister; W. W. CORY, Deputy Minister

DOMINION PARKS BRANCH

J. B. HARKIN, Commissioner

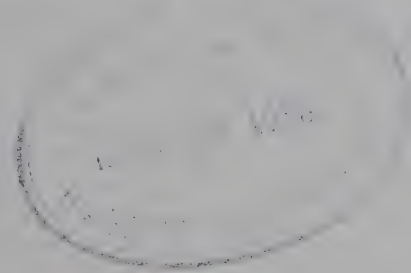
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Annual

REPORT OF THE COMMISSIONER OF DOMINION PARKS

FOR THE YEARS ENDING
MARCH 31, 1918 and 1919

1917/18 - 1918/19



OTTAWA
THOMAS MULVEY
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1920

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Moraine Lake in the Valley of the Ten Peaks, Rocky Mountains park.

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REPORT OF THE COMMISSIONER OF DOMINION PARKS FOR THE FISCAL YEAR ENDING MARCH 31, 1918.

During the fiscal year 1917-18 the work of the Dominion Parks Branch was extended to cover responsibility in connection with the Northwest Game Act and the Migratory Birds Convention Act.

In connection with the first act which deals with wild life matters in the Northwest Territories it was found that changed conditions required a complete revision of the act. A new act was drafted and was passed in August, 1917. The outstanding features of the new act are the provisions by which both the trapping and fur-trading are put under the license system. Through these provisions it is expected that the great fur resources of the North can be adequately conserved without any interference with reasonable commercial exploitation. Evidence had accumulated that alien interests, without any concern in the future, contemplated introducing large numbers of hunters into the north country with a view to a clean-up, utterly regardless of the effect upon the future, either as regards the wild life or the native population, which is almost entirely dependent upon the wild life for its food supply. The new act provides means of effectually handling such conditions.

The new act also provides special protective measures for musk-ox. Investigation showed that only such measures could prevent the extermination of this characteristic animal of the North.

BARREN-LAND CARIBOU.

Apropos of the Northwest Game Act it may be a matter of interest that the parks branch made very extensive investigation as to the possibility of utilizing the vast herds of barren-land caribou to supplement the meat supply of the Dominion. It is estimated that there are at last 20,000,000 to 30,000,000 caribou in the North. As a food, caribou meat is of first-class quality. The hide when tanned is equal to the best chamois. It is only a question of time when these vast herds will constitute a valuable asset for the Dominion. The only difficulty in the way of the utilization of these animals to-day is one of transportation. After full investigation it was felt that while, undoubtedly, caribou meat could be brought out now at fairly reasonable prices, the meat situation in the Dominion was scarcely such as called for immediate action. The caribou to-day constitutes a great meat reserve for the country which can be made available if food conditions should continue to grow worse.

Throughout the preparation of the act and regulations thereunder the department received gratifying co-operation on the part of the Hudson Bay Company, the Northern Trading Company and other interests concerned in the fur trade.

The administration of the new act is being carried on under the direction of the parks service. The actual administration on the ground is being carried on by the Royal Northwest Mounted Police.

MIGRATORY BIRDS CONVENTION ACT.

The Migratory Birds Convention Act was passed to give effect to the Canadian-American treaty providing for the protection of migratory birds. The treaty was entered into because it was recognized that the bird life of North America could be effectively conserved only by joint action of the United States, where the birds spend the winter, and by Canada, where the birds breed and spend the summer. The act was passed during the session of 1917 and the regulations thereunder were subsequently drafted and enacted.

Before the treaty was made all the provinces were consulted and all agreed to its principles. The supervision of the administration of the act rests upon the Department of the Interior. It is expected, however, that the actual administration on the ground will be carried on by the provincial authorities. The understanding is that the provinces will amend their legislation whenever necessary to make it conform with the terms of the treaty and that therefore when administering their own laws the provincial authorities will be administering the Federal Act.

So far as the Dominion is concerned it is felt that its most important duty at the outset, at all events, will be to carry on a campaign of education throughout the Dominion in order that the public may be made to realize the necessity of every one interesting himself in the subject of adequate protection of bird life.

THE PARKS AND THE WAR.

The parks service has been carried on with an appropriation equivalent to 45 per cent of the appropriation available before the war began. Necessarily, this has resulted in very little more than ordinary maintenance being carried on.

The war has also caused a diminution of tourist traffic from other countries. However, so far as Canadian tourist traffic is concerned, there has been a very substantial increase. This increase was very gratifying when it is considered that, primarily, national parks are maintained in order that the people of Canada may obtain in a maximum degree that recreation and relaxation in the out-of-doors which are essential to the well-being of the individual. The remarkable influx of people from the Prairie Provinces indicated that when our own people have brought home to them the opportunities their own parks offer they are quick to take advantage of them. In the spring of 1917 the department sent a lecturer to the West, who gave illustrated talks on the parks at Brandon and Regina and in almost every picture house in Alberta. The effect of his addresses was: "These are your own parks. They are right at your front door. Come and enjoy them." The result was that though foreign tourist traffic was much below the average, towns like Banff in Rocky Mountains park never before had such a prosperous year. The most satisfying feature of this is the feeling that thousands of our own people obtained the benefits parks have to offer in the form of renewed vigour and efficiency, mental and physical.

A large number of the visitors came to the parks in their own automobiles and camped out during their visit.

The number of automobiles which registered at the Kananaskis gate, Rocky Mountains park, were:—

1916..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	786
1917..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,000

This remarkable increase emphasizes the fact that the automobile is destined to be a dominant factor in parks tourist traffic. And it, therefore, also emphasizes the necessity of attention being concentrated on road development in parks.

THE BANFF-WINDERMERE HIGHWAY.

During the year negotiations were carried on with the province of British Columbia in regard to the completion of the Banff-Windermere highway. This road, when completed, will provide one of the most remarkable motor routes in the world. A motorist will be able to make a 500-mile round trip during every mile of which he will either be in the mountains or within sight of them. The route proceeding from Calgary via Banff crosses the main Rockies by Vermilion pass, proceeds down the Vermilion valley to the Kootenay valley; then via Sinclair pass to the Columbia valley. From there it proceeds along the Columbia to the Crowsnest Pass district by which it enters the prairies, proceeding thence to Calgary. Only about 50 miles of new construction remains to open up this wonderful route. The unfinished work

is in British Columbia. That province is not in a position to proceed with the work and has made proposals looking towards the Dominion undertaking this work. The direction the proposals have taken is that in return for completing this road the province should grant to the Dominion a 10-mile strip along the highway in British Columbia for parks' purposes, and that an amicable adjustment should be made in regard to the various matters of jurisdiction within Dominion Parks, concerning which there has been conflict as between the province and the Dominion. The subject has been gone into very completely and there appears to be no reason to anticipate anything but an adjustment satisfactory to both the province and the Dominion.

EDMONTON-VANCOUVER HIGHWAY.

Just as the Banff-Windermere Highway project is capable of completion by the linking up of constructed roads at comparatively little cost there is another automobile highway project which can be developed with very little new construction. This is a highway connecting Edmonton with Vancouver. The consolidation of the Canadian Northern and Grand Trunk Pacific railways from the vicinity of Edson, Alberta, to Moose lake, British Columbia, and the consequent abandonment of a first-class road grade between these points has made the project of a motor-road between Edmonton and Vancouver a practicable proposition. Edmonton is already connected with Edson by highway. From that point the abandoned railway roadbed will carry the highway across the main Rockies into British Columbia. The balance of the route to Vancouver is merely a matter of linking up existing roads. Last autumn Mr. Alfred Driscoll, C.E., an engineer in the parks service made a reconnaissance survey of this route. In his report he says:—

“The distance between Thompson river and Trout creek is 36 miles and this is the only stretch between Edmonton and Vancouver where an entirely new road is to be built, a remarkable fact, when the distance, some 800 miles, and the nature of the country between these two places is taken into consideration.”

Mr. Driscoll's estimate of the cost of this highway is \$1,000,000, a remarkably small sum when the results are considered. When it is realized that the twentieth century is to be the century of automobiles as the nineteenth century was the century of railways, and when the huge automobile traffic which originates along the American-Pacific coast is borne in mind, one cannot fail to be impressed with the view that a highway of this kind across the entire Rocky Mountain system will attract touring autoists in tens of thousands and thus provide huge returns upon the actual cost. The abandonment of the railway roadbeds has given Canada an extraordinary opportunity to construct a transmontane motor road. At the request of the Department of the Interior the Department of Railways is leaving the bridges, culverts, etc., on the abandoned roadbed intact. The advantages and the potentialities of this highway are bound to command attention in the years of readjustment at the conclusion of the war.

Another highway proposition which has been given consideration is one which will make available for automobiles the unparalleled scenic splendours of Glacier park made famous by the Canadian Pacific Railway “loops” in the Selkirks. The construction of the Connaught tunnel between Bear creek and Glacier has brought about the abandonment of the Canadian Pacific Railway tracks between these points, including Rogers pass, which was the highest point in the Canadian Pacific Railway system. With the granting of title to the railway company for the tunnel site, the old roadbed reverts to the Crown. The transformation of the roadbed into an automobile road is necessarily neither expensive nor difficult, and it will give about eighteen miles of highway among the towering peaks and marvellous icefields of the Selkirks.

ALIEN PRISONERS' CAMP.

Early in the summer of 1917 the last of the internment camps in the parks was closed down. This was necessitated by the release for industrial purposes of a large proportion of the alien enemies. It was not considered that the comparatively small number remaining would justify the continuation of the working camps and, therefore, the balance of the prisoners were transferred to camps in Northern Ontario. While the operation of the alien camps in Revelstoke, Yoho and Jasper parks did not yield as great results as anticipated, nevertheless substantial progress was made on works that could not otherwise have been undertaken during the war.

UTILIZATION OF PRISON LABOUR.

In connection with the question of road construction a great deal of investigation has been made upon the subject of the utilization of jail and penitentiary prisoners with the idea that this class of labour might eventually be secured for parks work. This investigation showed that in the United States most satisfactory results have been attained in many of the states in connection with road construction by prisoners.

One of the problems which those who deal with the prisoners have to meet is the provision of suitable employment. It is now generally admitted that it is very injurious to maintain prisoners either in idleness or in unproductive labour. The difficulty is to find employment which is productive and yet which does not compete with free labour.

I understand that in so far as possible Canadian prisoners are given productive work, but I note that the superintendent of Canadian penitentiaries says in his report for 1915:—

“Our officers are obliged to utilize labour at stonebreaking and other industries that are neither desirable nor profitable. For the insufficiency of suitable and productive employment the officers are in no way responsible.”

In this connection I would point out that there is an immense field for the employment of labour in the construction of roads in Canada; that this is work which is undoubtedly both necessary and productive and which at the present time, owing to the shortage of free labour and the high cost of wages, it is almost impossible to undertake.

It is, moreover, the experience of other countries that this form of employment not only does not interfere with the ends of prison discipline but that it is the best which can be adopted, not only economically for the state, but also in securing the reformation of the prisoner.

A considerable part of the roadbuilding in the United States in recent years has been made possible by the use of convict labour and the system is gradually being adopted throughout the entire country. Ten years ago only about one per cent of the prison population in the United States was engaged in roadwork; to-day over 12 per cent are so employed and all but two of the states have laws authorizing its use. For the most part the system was adopted primarily not for economic reasons, but to meet the problem stated by the superintendent of Canadian penitentiaries, the need of finding suitable and productive employment for prisoners. It was found in most states that the great majority of convicts were drawn from the ranks of those engaged in outdoor occupations. Their employment in prison shops had not only the disadvantage of competing with free labour but it resulted in a physical deterioration and prisoners were often unfitted when released to resume their former occupations. Prison farms, although offering suitable and healthful employment, were seldom remunerative and unless very large could not absorb all the available supply of labour. Road construction, on the other hand, is work which is very necessary to the state but which it is often impossible to undertake because of the expense involved. In addi-

tion, it has three advantages—it competes less than any other form of employment with free labour, it absorbs all available labour, and it has excellent physical and mental results in so far as the prisoners themselves are concerned.

As the system has been in practice in a number of the states for several years, under widely varying climatic and other conditions, there is now a considerable body of evidence as to its success. New Jersey, Michigan, New Mexico, Arizona, Utah, Texas, New York state, Washington, District of Columbia, Florida and Alabama all use prisoners for road construction.

Virginia employs an average of about 750 men in roadwork and is building macadam roads at a cost of \$3,400 per mile, where free labour had been costing \$4,900 per mile, a saving of \$1,500 per mile. At the last session the legislature appropriated \$250,000 for this division of the highway department. Georgia, employs approximately 5,000 of its prisoners in roadwork, South Carolina, 1,100, Louisiana, from 150 to 300. North Carolina has about 1,500 in 42 counties engaged in this form of labour, and has built 1,500 miles of hard-surfaced roads. Missouri, Greene county, has built 35 miles of standard 14-foot rock road with the aid of county prisoners at a cost of \$1,200 per mile. Colorado has been employing a daily average of about 200 men and has built over 1,000 miles of road, ranking with the best of the world, at about one-third the cost of free labour and an estimated total saving to the state of over \$1,000,000.

The general consensus of opinion appears to be that, properly conducted and operated under suitable conditions, the use of convict labour for this purpose permits of the construction of roads at a considerable saving to the state and offers the best solution with regard to the employment of prisoners.

Mr. G. P. Coleman, State Highway Commissioner for Virginia, said in his last address to the legislature:—

“I can say here, from an experience covering eleven years, that I know of no work on which convicts can be used which is of greater benefit to the state, first, in the upbuilding of the character of the criminal himself, since he soon learns that the work he is doing is of value to the state as a whole, and he takes pride in it as he grows to feel that he is instrumental in the development of the state whose law he has broken; second, in the construction and maintenance of its roads and the consequent development and expansion of the state’s resources.”

Mr. J. E. Pennybacker, Chief of the Division of Road Economics, Washington, says in a recent report published by the Department of Agriculture:—

“No field can be selected in which the expenditure of prison labour can be applied with greater benefit to the state for the reason that as a whole there is no greater need than the improvement of highways. It is true that the value of such labour cannot be measured so readily in dollars and cents as the industrial labour within the penitentiary, but there is every reason to believe that, properly conducted, the roadwork may be carried on with as much efficiency as the penitentiary industries, while the former has the additional advantage of requiring no sale or transfer to place it in public use. At this point let it be noted, that although the convict labour, so applied, may be of very great benefit to the state, it also is of benefit to the convict himself in that it brings to him the realization he cannot grasp in the prison shop grind, that he may be of real importance in life as a producing agent.”

The 1914-16 Biennial Report of the State Board of Prison Directors, California, contains the following:—

“During the last year embraced in this report the experiment of working prisoners in the construction and repair of highways in remote and sparsely

settled sections of the state has been tried. The result has been gratifying. One hundred and eighty-eight prisoners from San Quentin and 60 from Folsom prison were at work on roads at the close of the fiscal year.

"The percentage of escapes has been very small. We are advised by the Highway Department that the standard of efficiency is as great, if not greater, than that of free men employed in the construction of highways. It is approximately estimated that the cost of construction is considerably less than one-half of the cost of constructing roads with free labour."

Extract from report of the state warden in connection with the above:—

"At the session of the legislature in 1915, there was passed a law providing for the use of prisoners in the building of highways. Immediately after the law became effective preparations were made for putting it into immediate operation. In September, 1915, through the co-operation of the highway commissioners and your board camps were arranged and men selected for the work. The first group of men, 47 in number, were carefully selected and sent to the camp established for them near Cummings, in Mendocino county. Following, small groups of men have been sent since that time and now, after a year's operation, more than 300 men have been sent to the camps in Mendocino county from San Quentin and out of that number only 5 have been lost by escape. At the present time 188 men are engaged in that work, and I state it conservatively when I say that from the standpoint of work accomplished and standard of conduct maintained, the men have done very well and the system of building highways by prison labour under the honour system is a success. I feel safe in saying that this plan must be developed to an extent that will make it possible to build links in the main highway and also to construct laterals in mountain counties that might remain untouched for years."

Not long ago the United States Department of Agriculture conducted an investigation into the whole question and published its findings in a special bulletin "Convict Labour for Road Work." On page 11 of this report is the following:—

"Of all the advantages that are urged in favour of roadwork as an occupation, that which carries the greatest force is that such work is undoubtedly more healthful than any form of employment which may be provided in a prison shop. Hard manual labour in close touch, with nature and its fresh air and sunshine, is universally recognized as most beneficial while continuous dwelling within doors, with only such periods of exercise as it is convenient to allow, is a most unnatural life for all but a small proportion of the state's prisoners and is observed to have a depressing effect upon the vitality of most of the convicts, with no marked good effects upon any of them."

"Aside from its deleterious physical effect the monotony of prison shop labour has a tendency to reduce the mental activity of the inmate unused to such life, and upon release, many of the members of the professional and mercantile classes find themselves no longer able to keep pace with their more alert competitors. Work on the roads offering as it does, a variety of employment, has no such degenerative mental effect and for this reason, is better than shop work as an occupation for about three-fourths of the prison population."

Samuel W. Hill, the "Father of American Good Roads," declares:—

"There are four ways by means of which we may accomplish the great dream of a coherent comprehensive, national highways plan; first, through the gift of money for roadbuilding; second, through deferred taxation, bonds; third, through direct taxation; fourth, through convict labour. We in the northwest have found the fourth most effective. It is most remunerative for the people and the men."

Julian Leavitt, July, 1913:—

“Good roads are a crying necessity in this country. But until now the cost of building them has been prohibitive. We have scarcely begun to realize that in our 1,400 prison houses we have stored the labour power of 100,000 men and boys—truly an army of liberation if applied to a good purpose.”

With regard to the efficiency and discipline of these road camps, Thos. B. Tynan, Colorado, said:—

“The discipline at the camps has been as nearly perfect as possible and the effect upon the prisoners has given them superb health and has improved their physical condition. There is nothing to prevent a man’s escape, should he be so inclined, yet withal, out of over 1,000 individual men in the past three years the percentage of successful escapes from our camps is less than one per cent.”

The chief objections usually presented against this form of employment are:—

1. That it exposes the convict to the public gaze and so tends to harden both the public and the prisoner.
2. That it provides a greater opportunity for escape.
3. That convict labour is less efficient than free labour and that it is difficult to make prisoners work.

The first two objections have no force with regard to the proposal to utilize prisoners on roads in the parks, for the prisoners would be engaged in such remote districts that they would come in contact, practically, with no one, and the character of the country would make escape almost impossible.

With regard to the third there is a difference of opinion. As a rule the efficiency of the convict appears to depend chiefly upon the system adopted and the general spirit of the camp, due principally to the character of the camp officers. In many of the states prisoners are worked on what is known as the “honour system” and this has been found to produce the best results in the North and West. In the South where prisoners are of a lower type the “guard system” has been more successful, but where the general standards are higher, such as they are in Canada, the consensus of opinion is in favour of the honour system. By this method prisoners who have made good within prison walls are promoted to work on roads and an incentive to work is given by a system of rewards, by a deduction of so many days per month for good work and in some cases by paying them a small wage.

With regard to the comparative efficiency of convict and free labour the Chief of the Division of Road Economics states that this differs according to the class of work and general conditions. The United States Bureau of Labour has secured data in this respect from a large number of sources. In the South prison labour was found to be considerably more efficient than free labour. The New England States reported it about two-thirds as efficient; the Western States about equally efficient.

In this connection Warden Tynan of Colorado said:—

“Personally I believe that our men have worked far more faithfully, harder and with more enthusiasm than the paid labourer would. Not that the paid labourer is to be disparaged, but the convict employed on this class of work has the following special incentives; outdoor life, sunshine, better clothing, better food and more privileges as against the walls and rigid discipline of the prison, and an additional allowance of ten days per month from his sentence, and these incentives spur the men on to work with a degree of zeal, energy and loyalty that cannot be attained by the regular grading or mining camp.”

In 1913 prison labour was employed in Arizona for the construction of the Bisbee-Tombstone highway and a comparison of the work accomplished was made with that done by free labour under the same conditions a month later. The report shows that

not only was the work done by the convicts at lower unit costs but the actual work accomplished per individual in the same time was greater for convicts than for free men.

Activity.	July, prison labour.			September, free labour.		
	Total quantities.	Quantities per man.	Unit price.	Total quantities.	Quantities per man.	Unit price.
	Cu. yds.	Cu. yds.	\$ cts.	Cu. yds.	Cu. yds.	\$ cts.
Grading—						
Solid rock.....	1,649·7	21·42	1,375 00	981·6	13·82	2 13
Loose rock.....	961·3	12·48	0 59	521·6	7·34	1 51
Boulders.....	829·8	10·78	0 81	937·9	13·21	1 77
Excavation—						
Solid rock.....	389·5	5·06	1 23	219·1	3·09	2 67
Loose rock.....	21·5	0·28	1 16	3·0	0·04	1 66
Concrete.....	143·4	1·86	6 00	65·0	0·91	9 44
Masonry.....	44·4	0 58	5 46	37·0	0·52	6 53
Ditching—						
Solid rock.....	84·1	1·09	1 52	21·7	0·31	2 64
Earth.....	39·8	0·52	0 46	53·0	0·75	0 92
Clearing and grubbing....	7·0*	0·09*	11 31	3·0	10·04	11 87

*Acres.

One thing which adds to this form of labour is that it is absolutely dependable. Mr. Pennybacker says:—

“Plans for work can be made in advance with a sure knowledge that the anticipated number of labourers will be on hand to execute them. There can be no tardiness in the convict camp such as is frequently the fault with free labour, and furthermore, the regularity of the force enables a competent overseer to develop the maximum efficiency of each man to an extent that is not possible with shifting free labour.”

In connection with its investigations the parks branch during the past winter wrote to some of the states which have been especially successful in the use of prison labour as to their opinion of its comparative efficiency. The replies received were almost invariably favourable but I have room to quote from only one or two.

Extract from letter from Harden Bennion, Secretary of State, Utah, U.S.A., dated February 14, 1918:—

“For the past three years the state of Utah has successfully worked its convicts on the state roads and, while the expense of guarding and camp maintenance is somewhat higher than it would be if the men were confined in the penitentiary, yet the benefit derived from road construction accomplished, and particularly the benefit that comes to the men themselves through their being out in the open engaged in good hard work, is such that we feel abundantly justified and repaid for our efforts.

“I have been more closely associated with this work during the past year than heretofore, but for this season we have found that our prisoners do as much work, man for man, as anybody we can hire.

“We have little difficulty in preventing their escape and we find that they take pride in the work accomplished and seem to feel that they are more nearly like other men and, above all, we find the men in a much better condition to be turned loose on their own responsibility at the termination of their sentence; of course, we do not take out into the camps the dangerous or vicious men.”

Extract from letter from A. C. McKibbin, Secretary State Highway Board, Missouri, January 29, 1918:—

"The State Highway Department is using honour men from the Missouri State Penitentiary in road construction. This work was commenced several months ago but we have not compiled an extensive report. We have thirty men in each camp. We find the chief advantage lies in the fact that they soon become experienced roadbuilders, and take a very keen interest in their work. For example, we had occasion to make an eight-foot rock cut into nearly a quarter of a mile of solid rock in order to reduce a prohibitive grade. Three experienced miners accustomed to handling steam and air drills were assigned to this work. They accomplished wonders."

BUFFALO.

The Buffalo herds continue to thrive and expand. The following are the figures:

Park.	No. of Buffalo.
Rocky Mountains.. . . .	8
Buffalo.. . . .	2,920
Elk Island.. . . .	161
	<hr/> 3,089 <hr/>

An increase of 545 over last year.

During the winter of 1917-18 the department abandoned the practice of putting all the animals in Buffalo park into "winter quarters" and feeding them hay. Most of the cows and younger animals were driven into winter quarters but the balance of the herd were left on the range.

It was considered that economy would be served and that at the same time the compelling of the sturdy animals to rustle for themselves in the winter would contribute to their welfare much more than if they were regularly fed hay. Of course the herds on the range were carefully watched. These animals came through the winter in remarkably fine condition. It is now felt that except under abnormal conditions they will at all times be able to care for themselves as well in winter as in summer.

THE FUNDAMENTAL PURPOSE OF PARKS.

In each annual report in the past I have emphasized the fundamental purpose of national parks—the conservation of human vitality and efficiency in Canada. Each year that the war has been in progress accentuates the necessity of development on the lines that parks stand for. At the outbreak of the war Baden-Powell said that 1935 would show who was really victor. Each nation concerned is now expending lavishly the best it possesses in the way of human resources. The nation which devotes most attention to the conservation and development of the human resources which it retains is the nation that is going to stand highest in 1935. Speaking in Montreal, in 1908, Viscount Milner said:—

"I say, ultimately greatness and power rest on the welfare and contentedness of the mass of the people. And this involves so much; the physical health of men and women, with all that is necessary to ensure it: air, space, cleanliness, exercise, good houses, good food, and all that is included generally in domestic economy. Physical health first as the basis; then of course trained intelligence, the power of thought and observation, quickness of hand and eye, the development of various forms of industrial skill and so forth."

Physical health first as the basis, then trained intelligence. It is true there are many agencies that contribute to these but none contribute more than that for which national parks exist, viz., recreation close to nature. While national parks are centres

for recreation in the wilderness it is always considered that their influence must be made to extend far beyond those who visit the parks. The purpose of parks is as much to proclaim and teach the necessity of recreation everywhere as it is to provide specific areas for recreation. More and more the public are realizing that no human being can be at his best without recreation, especially recreation close to nature in the out-of-doors. People are recognizing this more perhaps from observation and experience of results than from reasoned analysis. But many acute minds have also analyzed conditions and have shown why man needs this sort of recreation and why this sort of recreation produces the results it does.

At the outset it is obvious that the tremendous commercial and economic changes brought about by civilization have radically changed man's habits of life. To-day every one feels the everlasting urge of progress. Men of the past worked intermittently. To-day the strenuous life of civilization compels man to live under stress and tension; men by sheer will power and concentration hold themselves down for long hours to desks and machines. Their natural inclinations are inhibited and restrained. This involves continuous mental effort, nervous strain and the constant use of the higher brain centres. Such conditions result in rapid and extreme fatigue and the need for rest and relaxation of some kind becomes imperative. Otherwise there follows lowered vitality, organic and nervous disease or actual physical break-down.

It is interesting to note that investigations by the Life Extension Institute (New York) show that there is a marked decline in the power of modern workers to withstand the strain of present day life. Organic disease of all kinds is on the increase and it is appearing much earlier in life. This means that men are wearing out sooner than they used to, many of them in the prime of life. It indicates that as a race we are growing weaker.

It is possible that in a few hundred years man will have become accustomed to the new demands upon him. In the meantime he has to learn how to keep fit under existing conditions. He does this best by temporary returns to simpler and more primitive behaviour in which the nerve centres in use during his ordinary occupations are not employed. Laughter, games, sport, recreation, rest, are the natural antidotes and the best.

Laughter means relaxation, games are imitations of primitive occupations, the hunt, the chase, or tribal warfare. In these old grooves, nerves, will, and action co-ordinate with so little effort as to produce a sense of pleasure. The older, the more basic, the more primitive the brain patterns used in our hours of relaxation, the more complete our rest and enjoyment. That is why so many brain and city workers feel the absolute necessity of returning each year for a brief time to the wilderness. Man is after all an out of doors animal. For thousands of years he lived by the camp fire and got his living by hunting or fishing. Nature has been his home for countless generations and when the strain and stress of civilization grow too heavy he turns back to her and finds rest, enjoyment, and recreation.

J. B. HARKIN.

APPENDIX No. 1.

ROCKY MOUNTAINS PARK.

SUPERINTENDENT, S. J. CLARKE.

During the past year the boundaries of Rocky Mountains park were enlarged from 1,800 to 2,751 square miles. The park now extends as far as the Clearwater river to the north, and takes in the watershed of the Kananaskis to the south. Both these areas have been protected for game purposes by the parks organization since the reduction of the parks boundaries in 1911. The northern area is one of the best game districts on the eastern slope of the Rockies and a natural breeding place for sheep, goat and deer. The Kananaskis district has long been a favourite objective for visitors to Banff. The lakes are not only very beautiful, but they provide some of the best fishing to be found in this park.

During the past season over four times as many autos visited Banff as ever before. This increase was due not so much to foreign or long distance travel as to visitors from the Middle West and was largely the result of the publicity work of the Dominion Parks branch. The automobile has practically driven the more picturesque but slower tally-ho off the roads.

Owing to the small appropriation due to the war and the removal of alien prison labour to an internment camp in Ontario, little new work was undertaken, the principal being the continuation of the construction of the Castle-Lake Louise motor road.

On the Calgary-Banff motor road a gang of men was employed on the maintenance and repair of 32 miles of road between the eastern entrance of the park and Banff.

On the automobile road to Castle mountain work was opened last year on the Johnston Creek canyon. A trail was made, where that was possible, low down in the canyon and a series of rustic bridges thrown across the stream, terminating opposite the first falls about half a mile from the mouth of the canyon. This spot was the principal objective of many of the motoring parties which came into the park and during July and August it was a rare day on which fewer than fifty car-loads were carried to see the wonders of this spot.

There are at the present time 134 miles of roads in the park, including the town streets, and 337 miles of trails. In Banff, townsite and villa, there are 40,558 feet of gravel and cinder walks, and 2,688 feet of asphalt macadam walk. There are also 45,440 feet of water mains and 40,752 feet of sewer.

A number of additional street water cranes were put in during the year which enabled the street sprinkling system in Banff townsite to be extended without extra expense.

The analysis of the Banff water supply gave uniformly satisfactory results.

FIRES.

There were no forest fires of any size notwithstanding the unusually dry season. The two minor ones that occurred provided an excellent test of the efficiency of the portable fire pumps.

The town fire brigade fortunately had not many calls during the year. It is a voluntary organization and its membership has been very largely depleted by enlistments in the Empire's fighting forces, but its work of protection is always prompt and admirably done.



Falls in Johnston Canyon, Rocky Mountains park.

GAME.

All game is plentiful and elk and moose have appeared in the park for the first time. During the year five mountain sheep were shipped to the Smithsonian Institute at Washington, D.C. During the winter the wardens destroyed 152 coyotes and 4 lynx. In the enclosure the animals are as follows: buffalo, 8; moose, 10; elk, 34; mule deer, 11; white tail deer, 2; Persian sheep, 5; angora goats, 15; Rocky Mountain sheep, 18; Rocky Mountain goat, 6; four-horned sheep, 23; yak, 19; yearling elk (brought from Gardner, Yellowstone park), 50.



Photo by D. McCOWAN, Banff.

Bighorn, or Wild Sheep, in Rocky Mountains park.

The increases at the animal paddocks were: yak, 4; elk, 3 (calves); Rocky Mountain lambs, 2; Rocky Mountain goat, 3 (caught by game wardens).

FISH HATCHERY.

This institution, under the Naval Department, is flourishing and valuable results are expected from its work.

The following fry were liberated into the lakes and streams:—

Lake Minnewanka—	
Lake herring.. . . .	2,189,000
Atlantic salmon.. . . .	102,940
Whisky Creek—	
Cut-throat trout.. . . .	12,527

A shipment was also made to Jasper and Yoho parks during the year. The fry in hatchery at end of October numbered 308,363.

There were 4,725 visitors to the hatchery during the season.

GOLF LINKS.

The taking over of the golf links from the hotel management of the Canadian Pacific Railway before the opening of the summer season met with the most successful results which ever attended the operation of the course, both in the matter of revenue and the number of players.

An extension of the course by another nine holes was begun in the early summer, making use of alien labour for this purpose, but the work was postponed, when the alien camp closed down. At the end of the season, however, a gang of workmen was put on and excellent progress made.

LICENSES.

A statement of the licenses issued shows:—

Autos.. . . .	1,756
Livery (horse).. . . .	13
Boats of various sorts.. . . .	53
Miscellaneous.. . . .	388

Seventy-one grazing and 114 timber permits were also issued.

The auto licenses show a considerable increase over last year.

There was little building done during the season. The number of permits issued was 23, covering an estimated total expenditure of \$16,630.



Kananaskis Lake, Rocky Mountains park.

An excellent camping ground was laid out at the junction of the Bow and Spray rivers and was very popular. Seventy-three permits, exclusive of those to visitors during the auto week, were issued.

WINTER CARNIVAL.

The second winter carnival, with its ice palace and sports, was held at Banff, February 8-18, and proved a great success. Probably there is no place in Canada which is so ideally situated or possesses so many natural attractions as Banff. It therefore seems possible that when the war is over and things return to a more normal condition, the town may become not only the Mecca for the summer tourist but also the winter play-ground for all America.

THE BATH HOUSES.

These were well patronized. The number of bathers at the upper hot springs during the past year was nearly 27,000, the largest on record.

At the cave and basin there were 35,411 bathers; 34,048 paying and 1,363 free. This was an increase of 6,773 over the previous year.

HEALTH.

Public health in the park was uniformly good. During the year Dr. R. H. Brett was appointed parks medical health officer. He will undertake duties of a nature intended to prevent outbreaks of infectious disease and otherwise help the administration in the general maintenance of the health of the park.

THE BANFF MUSEUM.

The museum under Curator N. B. Sanson did good work during the year, and added a number of interesting specimens to its well arranged exhibits.

THE ALPINE CLUB OF CANADA.

The Banff Club House.

The Alpine club house was open as usual during June, July, August and September, to members and their friends. Many inquiries were received about the geography of the country and the possibility of expeditions outside the conventional drives organized by the transportation companies.



Mt. Assiniboine and the Assiniboine Group, south of Banff.

The second ascent of mount Louise was made and declared to be the hardest rock climb in the Rockies or Selkirks known to the climbers, Mr. V. A. Flynn of the English and Canadian Alpine clubs and Edward Feuz, the Swiss guide.

Mount Rundle was climbed and the trip to and through Johnson canyon found to be most attractive. The river grows in popularity. From it are undoubtedly obtained the finest views of the mountains within easy reach.

At Lake Louise the usual ascents were made. Mr. Flynn, with Rudolph Aemmer, made the summits of mounts Lefroy and Victoria in one long day, the first time such an expedition had been attempted.

The visitors to the club house were drawn from every province in Canada, and from as far east as New York and New England in the United States.

APPENDIX No. 1a.

STATEMENTS OF PERSONS REGISTERED AT THE VARIOUS HOTELS IN THE ROCKY MOUNTAINS PARK DURING THE PERIOD FROM 1st APRIL, 1917, TO 31st MARCH, 1918.

HOT SPRINGS HOTEL (open all year).		HOMESTEAD HOTEL (open during summer months only).	
Canada..	540	Canada..	2,412
United States..	15	United States..	658
Other countries..	3	Great Britain..	3
	558	Other countries..	12
			3,085

MOUNT ROYAL HOTEL, from May 1, 1917, to October 15, 1917.	BANFF SPRINGS HOTEL, Banff, Alta., Seasons 1916 and 1917.
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Total visitors, 5,150. (This hotel does not keep any record of the nationality of its visitors.)		1916.	1917.
		Ohio..	115
		(Cleveland)..	134
		(Cincinnati)..	74
		Michigan..	91
		(Detroit)..	108
		Indiana..	95
		(Indianapolis)..	39
		Illinois..	218
		(Chicago)..	607
		Iowa..	118
		Total..	1,599
			1,126
		Decrease..	473

ALBERTA HOTEL (open all year.)			
Canada..	3,845	Missouri..	46
United States..	610	(St. Louis)..	107
Other countries..	18	(Kansas City)..	45
	4,473	Kansas..	32
		Arkansas..	10
		Oklahoma..	15
		Nebraska..	37
		(Omaha)..	16
		Texas..	73
		Total..	365
			321
		Decrease..	44

SANATORIUM HOTEL.			
No records were kept by this hotel during the season. Estimated number of guests, 5,000.		Wisconsin..	74
		(Milwaukee)..	74
		Minnesota..	64
		(Minneapolis)..	159
		(St. Paul)..	63
		North Dakota..	30
		South Dakota..	4
		Total..	468
			382
		Decrease..	86

KING EDWARD HOTEL, from April 1, 1917, to March 31, 1918.			
Canada..	5,253		
United States..	605		
England..	25		
Australia..	30		
China..	8		
New Zealand..	4		
India..	4		
Hawaii..	4		
Scotland..	3		
Java..	3		
Holland..	2		
Wales..	1		
Korea..	1		
Germany..	1		
	5,944		

BANFF SPRINGS HOTEL, Alta.—*Concluded.*

1916.		1917.	
Washington..	182	149	17
Oregon..	110	74	82
California..	293	249	84
(San Francisco)..	191	218	24
(Los Angeles)..	229	145	72
Total..	1,005	835	3,283
Decrease..	170		1,238
Nevada.. . . . .	..	11	52
Montana..	66	8	51
Idaho..	2	9	6
Colorado..	20	12	9
Utah..	6	2	40
Arizona..	12	6	37
Total..	66	48	31
Decrease..	18		12
			1
Total..			248
Decrease..			88
Alaska..	3	1	1916.
West Indies..	13	10	1917.
Java.. . . . .	..	18	85
Mexico and Central America..	2	6	4
South America..	7	7	12
Total..	25	42	10
Increase..		17	7
			14
Total..			132
Increase..			26
Manitoba..	1916.	1917.	
(Winnipeg)..	22	61	
Saskatchewan..	355	574	
Alberta..	189	331	
British Columbia..	1,427	1,818	
Total..	210	254	
Total..	2,203	3,038	
Increase..		835	
Newfoundland..	3	—	
Prince Edward Island..	6	8	
Nova Scotia..	7	25	
New Brunswick..	11	30	
Quebec..	244	232	
Ontario..	487	567	
Total..	758	862	
Increase..		104	
Maine..	24	16	
New Hampshire..	11	5	
Vermont..	11	13	
Massachusetts..	312	107	
(Boston)..	206	172	
Connecticut..	114	61	
Rhode Island..	44	25	
New York State..	295	233	
(New York City)..	1,234	781	
Pennsylvania..	224	70	
(Pittsburg)..	38	73	
(Philadelphia)..	296	168	
New Jersey..	195	150	
Kentucky..			26
Tennessee..			30
North Carolina..			7
South Carolina..			3
Georgia..			13
Alabama..			27
Louisiana..			39
Mississippi..			12
Florida..			3
Total..			160
Decrease..			
England..			85
Ireland..			4
Scotland..			12
France..			10
Holland..			7
Other European countries..			14
Total..			132
Increase..			26
Australia..			112
New Zealand..			49
China..			50
India..			27
Hawaii..			41
Philippine Islands..			14
Japan..			26
Africa..			5
Asia..			5
Persia..			2
Straits Settlement..			14
Total..			345
Decrease..			137
Unlocated..			121
Conducted Parties (otherwise unlocated.)			
Raymond & Whitcomb..			56
Thos. Cook & Sons..			20
G. K. & B.			48
Various parties..			73
Total..			197
Decrease..			78
Total, 1916..			10,812
Total, 1917..			9,414
Decrease..			1,398

STATEMENTS OF PERSONS REGISTERED AT THE VARIOUS HOTELS
IN THE ROCKY MOUNTAINS PARK DURING THE PERIOD FROM 1st
APRIL, 1917, TO 31st MARCH, 1918.—*Continued.*

CHATEAU LAKE LOUISE.			CHATEAU LAKE LOUISE.— <i>Continued.</i>		
Manitoba.. . . .	39	21	Missouri.. . . .	42	50
(Winnipeg)	203	222	(St. Louis).. . . .	88	132
Saskatchewan.. . . .	319	128	(Kansas City).. . . .	75	64
Alberta.. . . .	721	504	Kansas.. . . .	40	54
British Columbia.. . . .	158	164	Arkansas.. . . .	11	14
			Oklahoma.. . . .	39	24
Total	1,440	1,039	Nebraska.. . . .	49	83
			(Omaha).. . . .	38	27
Increase.. . . .		401	Texas.. . . .	79	87
Prince Edward Island.. . . .	3	2	Total.. . . .	461	535
Nova Scotia.. . . .	17	11			
New Brunswick.. . . .	23	19	Decrease.. . . .	74	
Quebec.. . . .	122	170			
Ontario.. . . .	417	447			
			Wisconsin.. . . .	96	128
Total.. . . .	582	649	(Milwaukee).. . . .	60	101
			Minnesota.. . . .	50	125
Decrease.. . . .	67		(Minneapolis).. . . .	222	356
			(St. Paul).. . . .	54	98
Maine.. . . .	22	26	North Dakota.. . . .	43	30
New Hampshire.. . . .	4	32	South Dakota.. . . .	10	19
Vermont.. . . .	13	15			
Massachusetts.. . . .	184	328	Total.. . . .	535	857
(Boston).. . . .	192	309			
Connecticut.. . . .	87	162	Decrease.. . . .	322	
Rhode Island.. . . .	43	93			
New York State.. . . .	235	348			
(New York City).. . . .	908	1,272	Washington.. . . .	208	340
Pennsylvania.. . . .	92	206	Oregon.. . . .	123	184
(Pittsburg).. . . .	91	114	California.. . . .	466	504
(Philadelphia).. . . .	202	328	(San Francisco).. . . .	276	281
New Jersey.. . . .	183	216	(Los Angeles).. . . .	243	409
Delaware.. . . .	4	14	Nevada.. . . .	8	3
Maryland.. . . .	34	93			
District of Columbia.. . . .	51	109	Total.. . . .	1,324	1,721
West Virginia.. . . .	23	27			
Virginia.. . . .	25	66	Decrease.. . . .	397	
Total.. . . .	2,393	3,758	Montana.. . . .	6	15
			Idaho.. . . .	10	8
Decrease.. . . .	1,365		Wyoming.. . . .	1	—
			Colorado.. . . .	16	19
Kentucky.. . . .	36	69	Utah.. . . .	—	8
Tennessee.. . . .	34	75	Arizona.. . . .	6	9
North Carolina.. . . .	10	11			
South Carolina.. . . .	2	9	Total.. . . .	39	59
Georgia.. . . .	33	59			
Alabama.. . . .	27	27	Decrease.. . . .	20	
Mississippi.. . . .	7	11			
Louisiana.. . . .	35	43	West Indies.. . . .	5	19
Florida.. . . .	10	27	Mexico and Central America.. . . .	1	3
			South America.. . . .	4	8
Total.. . . .	194	331			
			Total.. . . .	10	30
Decrease.. . . .	137				
			Decrease.. . . .	20	
Ohio.. . . .	200	284			
(Cleveland).. . . .	75	156	England.. . . .	34	66
(Cincinnati).. . . .	63	102	Scotland.. . . .	3	12
Michigan.. . . .	114	151	Ireland.. . . .	2	—
(Detroit).. . . .	73	124	France.. . . .	2	13
Indiana.. . . .	62	141	Italy.. . . .	—	2
(Indianapolis).. . . .	32	61	Switzerland.. . . .	—	2
Illinois.. . . .	223	346	Holland.. . . .	65	7
(Chicago).. . . .	623	801	Other European countries.. . . .	14	3
Iowa.. . . .	181	249			
			Total.. . . .	120	105
Total.. . . .	1,646	2,415			
			Increase.. . . .		15
Decrease.. . . .	769				

STATEMENTS OF PERSONS REGISTERED AT THE VARIOUS HOTELS
IN THE ROCKY MOUNTAINS PARK DURING THE PERIOD FROM 1st
APRIL, 1917, TO 31st MARCH, 1918.—*Concluded.*

CHATEAU LAKE LOUISE.— <i>Concluded.</i>				<i>Conducted Parties (otherwise unlocated).</i>	
Australia..	66	102	Raymond & Whitcomb..	10	37
New Zealand..	50	34	G. K. & B..	52	78
China..	60	55	Various..	20	85
India..	11	15			
Hawaii..	35	38	Total..	82	200
Philippine Islands..	12	20			
Africa..	7	6	Decrease..	118	
Japan..	17	20			
Straits Settlements..	10	13	Unlocated..	61	64
Total..	268	303			
			Total, 1916..		12,066
Decrease..	35		Total, 1917..		9,155
			Decrease..		2,911

SUMMARY.

Banff Springs Hotel..	9,414
Lake Louise Chalet..	9,155
Hot Springs Hotel..	558
Mount Royal Hotel..	5,150
Alberta Hotel..	4,473
Homestead Hotel..	3,085
Sanitarium (estimated)..	5,000
King Edward Hotel..	5,944
Summer Cottagers and Campers..	8,000
Excursionists (estimated)..	7,000
Motorists..	10,000
	67,779
Total previous year..	57,250
Increase..	10,529

MONTHLY PRECIPITATION.

Month.	Rain.	Snow.	Total.
1917.			
January . . . . .	.....	7'3	0'73
February . . . . .	.....	3'45	0'34
March. . . . .	.....	11'3	1'13
April..	R.	8'0	0'80
May	2'29	9'9	3'28
June..	2'80	1'5	2'95
July	0'46	.....	0'46
August..	1'87	.....	1'87
September	1'10	.....	1'10
October	0'52	5'7	1'09
November	0'27	0'35	0'31
December	0'27	31'5	3'41
	9'58	79'00	17'47

Total annual precipitation—17'47.

1918.			
January	0'09	7'9	0'88
February	0'01	19'4	1'95
March.	0'05	1'42	1'46

MONTHLY MAXIMUM AND MINIMUM
TEMPERATURES.

Month	Maximum.	Mini- mum.
1917.		
January..	39'8	—38'9
February	44'2	—43'5
March	42'3	—11'1
April	49'0	—4'7
May.	71'2	16'9
June..	77'6	29'2
July	90'1	35'0
August..	84'0	29'8
September..	75'6	25'3

MONTHLY MAXIMUM AND MINIMUM
TEMPERATURE.—*Con.*

Month.	Maximum.	Mini- mum.
1917.		
October..	66'8	0'3
November..	56'0	15'8
December..	44'2	—29'9
1918.		
January..	48'2	—39'9
February..	37'0	—36'7
March	51'0	—31'0
Yearly maximum for 1917—90'1.		
Yearly minimum for 1917—43'5.		

MONTHLY AVERAGE TEMPERATURE.

Month.	Average.
1917.	
January..	11'4
February..	12'5
March..	20'1
April..	31'9
May..	44'5
June..	50'0
July..	60'5
August..	56'4
September..	48'9
October..	38'2
November..	35'1
December..	9'9

Average annual monthly temperature—
35'0.

1918.	
January....	14'7
February..	14'2
March..	26'0

APPENDIX No. 2.

YOHO PARK.

SUPERINTENDENT E. N. RUSSELL, FIELD, B.C.

WORK OF THE YEAR.

Early in the year, the usual spring cleaning was done in the townsite of Field, and necessary repairs were made to the sidewalks and streets.



Photo by BYRON HARMON.

TRAIN ENTERING TUNNEL ON FIELD HILL.

Mt. Cathedral (10,454') above.

Some protection work to the bank of the creek at the back of the townsite was also done, as it was considered that the creek might break through and flood the town. Repairs were made to the high bridge at Ottertail over the Ottertail river, and also to the Ottertail and Emerald Lake roads.

ROADS AND TRAILS.

Work was continued on the Ottertail Natural Bridge road. About $2\frac{1}{2}$ miles of grading was completed. This road will connect the abandoned railway grade at Ottertail, now used as a highway, with the Emerald Lake road at a point near the Natural bridge. When completed it will be a drive full of unsurpassed scenery. The road will be the only loop drive in the park, and have a total length of from fourteen to fifteen miles.

Necessary repairs were made on all existing trails, and visitors report that they were never in such good condition.

FIRE PROTECTION.

There were no serious losses from forest fires. The portable pumping unit proved of great assistance in fire fighting. For better fire protection a telephone line has been constructed linking up the outlying districts with the central office.

ALPINE CLUB.

The twelfth annual meeting of the Alpine Club of Canada was held in Yoho park during the summer. The camp was pitched in the valley of Cataract creek, about three miles from Hector station, and all the arrangements were excellently carried out. The attendance was slightly better than last year and was considered very satisfactory in view of the times.

FISH.

A beginning was made this year towards stocking some of the lakes in the park with fish, and 30,000 cut-throat trout fry were obtained from the hatchery at Banff of which 10,000 were placed in Wapta lake, near Hector, and 20,000 in Emerald lake. In a few years' time the park should have the best of fishing to offer.

APPENDIX No. 2a.

THE ALPINE CLUB OF CANADA.

CAMP IN CATARACT VALLEY, S. H. MITCHELL, SECRETARY.

The twelfth annual camp of the Alpine Club of Canada was held in the valley of Cataract brook, about three miles south of Hector, from July 17 to 31. Though a camp had been held there as late as July, 1913, the neighbourhood proved full of attraction. Ninety-one members in all were placed under canvas, a satisfactory attendance considering how heavily the war has drawn on the club.

Since the former camp the stream flowing from the glacier by the "Watch Tower" of mount Victoria has washed down much rock and gravel and tents had to be pitched a little farther north. A subsidiary camp was placed in the open meadow near lake O'Hara where the club held its famous camp of 1909. Tents were also pitched in Paradise valley for the convenience of those who made the journey over the Abbot, Mitre, Wastach, Wenkchemna and Opabin passes.

For the greater part of the time the weather was perfect and the following mountains were climbed: Hungabee, Huber, Oday, Cathedral, a peak of Victoria ridge, south of Popes peak, and Schaeffer. The Vanguard peak of mount Cathedral proved a most excellent rock climb, and lakes McArthur and Oesa were visited by various parties, as well as Sherbrooke lake. Twenty-one members graduated to active membership on the various peaks.

Dr. Hickson travelled up the north fork of the Illicillewaet and conquered the hitherto unclimbed mount Moloch. Mount Sir Donald was climbed by the northwest arete and several other less important ascents made by members.

Mr. L. O. Armstrong, the veteran lecturer on the attractions of Canada, an original member of the club, was present in camp, gathering new material on every side. Unfortunately Mr. A. D. Kean, the well-known cowboy, now a moving picture expert, who collaborates with Mr. Armstrong, was detained in a lighthouse on the Pacific coast by stress of weather, and only arrived in camp as the weather was breaking. However, some photographs were obtained of mountaineering which will set an original seal on Mr. Armstrong's next set of lectures.



Photo by BYRON HARMON.

Pack train on a Mountain Pass, Canadian National parks.

Miss A. Peck, well known in mountaineering circles, from her climb of mount Huascaran in South America, was also in camp, but unfortunately experienced the only spell of bad weather and was unable to climb.

From the annual meeting a resolution of sympathy and admiration was sent to the club members at the front, whose record of distinction is a remarkable one.

There were present members of the English, Swiss and American Alpine clubs, and of the Royal Geographical Society.

APPENDIX No. 3.

GLACIER PARK.

SUPERINTENDENT, E. N. RUSSELL.

In this park all the trails have been cleared out and repaired, and the bridges over the Beaver river and Grizzly creek renewed. A gang of men also cleared the large rock slides off the road to the Nakimu caves.

Upon the completion of the Canadian Pacific Railway tunnel the old roadbed through the park was taken over by the park authorities. It includes the famous

"Loop in the Selkirks," and the road when completed will make a carriage drive of unequalled interest.

The townsites at both ends of the Connaught tunnel, now no longer occupied by the railway contractors, have been thoroughly cleaned up, as has also the old townsite of Rogers pass. All buildings have been pulled down with the exception of the round-house, whose concrete walls are still standing.

APPENDIX No. 4.

REVELSTOKE PARK.

ACTING SUPERINTENDENT, E. N. RUSSELL.

Owing to the war, little has been done in the way of development with the exception of work on the motor road. This road will give access to the summit from Revelstoke, and its total length when finished will be seventeen miles.

WORK OF THE YEAR.

In the spring the precaution of clearing out the obstructed water channels and culverts prevented a number of washouts on the motor road.

General repairs were made on the portions already built, and the construction of the Bridge Creek bridge was continued. This is a solid structure, one hundred feet in length. From this point the road was cut out and graded, side ditches made, bridges and culverts constructed, etc., as far as station 645.

SPORTS.

During the year the Revelstoke Ski Club which held a certain area of land adjacent to the southern boundary of the park, have, by their own wish, had this area included within the park limits, and in the fall of the year the department undertook certain improvements to the jump which have made it one of the finest in the world. This club has done much to bring Revelstoke and the park into prominence, as the home of winter sports.

TELEPHONES.

The telephone line was extended to the site of the road camp at Bridge creek and a connection made with the warden's cabin on the auto road. This telephone line proved invaluable in carrying on the work of road construction. It is hoped next year to extend it to the summit of the mountain, where it is suggested a cabin should be erected for the use of the warden in connection with his patrol work.

VISITORS.

Among the distinguished visitors to the park this year were His Excellency the Duke of Devonshire and party, who were driven up the auto road as the guests of the city of Revelstoke.

APPENDIX No. 5.

JASPER PARK.

SUPERINTENDENT, LT.-COL. S. M. ROGERS, JASPER, ALTA.

Owing to the restricted appropriation, little work was undertaken in Jasper park during the year, attention being chiefly concentrated on keeping the existing roads, trails and bridges in repair.

There are over 400 miles of trails in Jasper park which give access to practically all the important scenic points and nearly 100 miles of roads.



Photo, W. J. TOPLEY.

Lake Lucerne and the "Seven Sisters," Jasper park.

The great need of keeping the trails open was emphasized by two forest fires during the summer in the northeast corner of the park. So far as could be ascertained, both fires were caused by lightning.

Several smaller fires along the railway emphasizes the desirability of having all engines passing through the mountains converted into oil burners.

FISHING.

The supply of game fish in the park appears to be increasing and young fry were also secured from the Department of Fisheries. Pyramid and Jack lakes are both excellent fishing grounds; in the former 10-pound trout were caught early in the season and later 8 and 6-pounders were common. Caledonia lake can almost always be depended on for a good catch of rainbow trout.

WILD LIFE.

The game is noticeably increasing and thanks to the efficiency of the wardens' service the coyote pest has been greatly reduced.

MOTOR HIGHWAY.

The abandonment of over 200 miles of railway opens the way for a possible motor highway through the park. An automobile road from Edmonton to Jasper has long been under discussion and would involve few difficulties in the way of construction. The road would bring the park within easy reach of thousands in the Prairie Provinces.

ACCOMMODATION.

At present Jasper park suffers, from the tourists' point of view, from the absence of a hotel. The Grand Trunk Pacific Railway Company, some years ago, had plans drawn up for a million dollar building but the outbreak of the war put an end to the project. To meet the needs of the travelling public the company has maintained for the past three years, a very comfortable "tented city" on the shores of lac Beauvert.

APPENDIX No. 6.

WATERTON LAKES PARK.

SUPERINTENDENT, ROBT. COOPER, WATERTON PARK, ALBERTA.

Owing to the need for the strictest economy, little new work was undertaken. Special effort was made, however, to put the park roads into good condition. As a result of this and also of the publicity campaign conducted in Alberta during the spring, the tourist traffic to the park was much larger than in former years.

Further repair work was also done on the Oil City Boundary road—which was gone over last year as far as Oil City. This year the work was continued to the British Columbia boundary.

Where this road crosses the Blakiston brook, or Pass creek, a bridge is urgently needed. When built it will greatly increase the traffic along this thoroughfare. The road, which should be widened and straightened in many places, leads through some of the best scenery in this section. It is also the only road in the park which takes one back into the so-called hinterland, and its accessibility by automobile will no doubt be largely taken advantage of.

IMPROVEMENT WORK.

Two branch telephone lines were built during the season and two partly constructed, making a total length of about 24½ miles.

Fallen timber was cleared from the trails already in existence but no new trails were constructed.

A number of new buildings were erected including several summer cottages and two or three buildings for business purposes.

Practically all the lots in the townsite of any value as building sites for cottages, were disposed of.

CAMPING GROUND.

A small appropriation was authorized during the year for the enlargement of the camping grounds, and good headway was made in clearing it.



On the Top of Table Mountain, Waterton Lakes Park.

As the hotel accommodation in this park is limited, the camping grounds are frequently overcrowded. Although there are many other places where one can pitch a tent the ideal camping ground is near the Cameron falls amongst the pine trees. This is close to the townsite and has everything essential to a perfect camping ground, water, trees, view, etc.

GAME PROTECTION.

The big game in the park is very plentiful and increasing each year. Considerable trouble was experienced with wolves and coyotes and a vigorous campaign is being conducted to rid the park of these predatory animals.

The lakes and rivers swarm with ducks, geese and other feathered game. The geese remain until very late in the season, and last fall they did not leave until nearly Christmas.

FIRE.

Owing to the efficiency of fire protection, no fires of any importance occurred during the year. This is all the more satisfactory in view of the large number of campers and wood haulers in the park at all times of the year.

GRAZING AND TIMBER.

The grazing privileges are in great demand at all times. There were approximately 3,300 head of stock grazed in the park under permit.

The demand for dry wood permits is still great, showing that this opportunity of securing fuel at a merely nominal price is much appreciated; 65 dry wood permits were issued to the settlers in the surrounding country.

VISITORS.

There were approximately 8,500 visitors to the park during the season, an increase over last year of more than 100 per cent.

Among these were Messrs. G. S. Yard and V. Baillie of the Parks Department, Department of the Interior, Washington, D.C., who had in view the development of a road to the Agassiz and Kintla glaciers, in United States Glacier park. The only feasible route to these glaciers is through Waterton Lakes park.

APPENDIX No. 7.

BUFFALO PARK.

SUPERINTENDENT, A. G. SMITH, WAINWRIGHT, ALBERTA.

In addition to caring for the buffalo, Buffalo park also carries on a farm which produces the winter feed of the buffalo and sufficient oats to supply not only the requirements of the park but several of the other parks as well.

FARMING OPERATIONS.

Some 400 acres were seeded to oats, part of which had been summer-fallowed. The dry season however proved too much for the light land, and the result was the yield was not quite twenty bushels per acre. In addition to producing the oats required for the park until the next crop and the seed for next year, it was possible to ship over 2,100 bushels to the other Dominion parks.

At the farm about 200 acres of the land under cultivation were summer-fallowed, this being the usual amount of land so treated each year.

The small acreage usually under crop at the home paddock was also put in summer-fallow, as two crops had been taken off and it was not thought advisable to do more with such light land.

HAYING.

While the dry season was unfavourable for growing oats, it helped in the haying operations.

Some 1,200 tons of hay were cut and stacked, all of which was hauled during the winter, and most of it stacked in the hay corral adjoining the feed grounds in the winter quarters, to be carried over summer.

In addition to the hay cut for the use of the park, the department has endeavoured to help production by granting hay permits to settlers living in the vicinity. Hay permits covering the cutting of 671 tons on the Buffalo Park reserve were granted to settlers during the year."

FIRE-GUARDING.

All the fire-guards around and across the park were ploughed.

There were two small fires in the park, caused by lightning. There were also a number of fires close to the park boundary, some started by the sparks of a railway engine and others by settlers clearing land; in every instance men were sent to help put them out.



Buffalo park, Wainwright, Alta., the Home of the Government's great Buffalo Herd.

To enable the riders to see the fence and also for fire protection purposes, considerable brush was cut out between the fire-guards along the main fence.

Fifteen miles of new fence were erected around the cattalo enclosure and about twenty-one miles of the main fence were repaired before the frost came.

TIMBER PERMITS.

About 1,000 cords of dry wood were taken out of the park, under permit, by nearby settlers.

Some cleaning up was done on the lots recently surveyed on the shores of Mott lake. This expenditure was very necessary before any use could be made of this beautiful resort.

WILD ANIMALS.

During the year there was an increase of 537 buffalo, and only 14 of a decrease, of this number 9 died, 4 were shot on account of being crippled, and 1 shipped to Brandon.

The elk show an increase of 14 and there has been no decrease.
The deer and moose also show an increase..
The following is the number of animals now in this park:—

Buffalo..	2,290	Moose..	18
Elk..	284	Antelope..	3
Deer (estimated)..	397	Cattalo..	19

As there was plenty of feed in the large park, the greater part of the buffalo herd was left out to rustle during the winter months and they have come through the winter apparently in as good condition as when fed in winter quarters. Whenever possible, during the fall and winter, the cows with calves by their side and yearlings were cut out of the main herd and placed in winter quarters where they have been fed daily.

COYOTES.

During the year a special effort was made to lessen the number of coyotes in the park which had become a serious nuisance. As other methods had met with indifferent success, it was decided to try the experiment of hunting them with dogs. Some Great Danes owned in the neighbourhood were secured and during the winter a steady hunt was kept up. The results were so satisfactory that the same method will probably be followed next year and it is hoped that eventually we shall be able to rid the park almost entirely of these pests.

VISITORS.

This has been a record year for visitors, due no doubt to motor cars being allowed to enter the park. At the home paddock entrance the records show 4,238 visitors. These were from every province in Canada, from Newfoundland and from 19 of the different states of the American Union. The records kept at the farm and at the Hardisty gate also show a great increase in visitors. The total for the year was nearly 5,000.

APPENDIX No. 8.

ELK ISLAND PARK.

SUPERINTENDENT, ARCHIBALD COXFORD.

The road to the main entrance was repaired this season and some minor repairs were made to the main fence.
The fire-guards were disked in October putting them in good condition for the fall and spring.
A supply of hay sufficient for winter feeding was obtained, chiefly from the vicinity of Goose lake.

ANIMALS.

The animals are in good condition and wintered well. There was an increase of twenty-seven buffalo during the year and no losses. The elk and moose are also doing well. The total estimate of animals in the park at present is as follows:—

Buffalo..	161	Elk (estimated)..	106
Moose..	52	Deer..	115

During the nine months of the year there were 1,710 visitors.
5323—3½

APPENDIX No. 9.**ST. LAWRENCE ISLAND PARKS.**

These parks consist for the most part of islands which were purchased from the Department of Indian Affairs a number of years ago.

They are situated in the St. Lawrence river between Brockville and a few miles west of Gananoque and form a part of the beautiful Thousand Islands district.

Only such work as was necessary to preserve the present equipment and to make the parks available for the public was carried on during the year.

Negotiations are under way to secure Doran's island which is situated just opposite the town of Morrisburg. It is a beautiful island and contains approximately 20 acres.

APPENDIX No. 10.**FORT ANNE PARK.**

A. L. FORTIER, *Honorary Superintendent.*

This park comprises the site of the old Fort Anne at Annapolis Royal, Nova Scotia. It is one of the historic parks and was created to preserve the original fort which played such an important part in the early history of Canada.

The work in this park comprised chiefly such improvements as were necessary to preserve the old fort buildings and equipment. An old cottage on the fort property at the park entrance was removed.

A new sundial was donated by Colonel Shannon in memory of his ancestor, George Vaughan, who was at the siege and taking of the old fort in 1710.

A start has been made in a collection for a park library and museum and temporary quarters have been provided for them.

There is a caretaker to look after the grounds and building and show visitors around the fort.



The magnificent group of peaks surrounding Lake Louise, The "Beehive" and Lake Agnes in foreground.

REPORT OF THE COMMISSIONER OF DOMINION PARKS FOR THE FISCAL YEAR ENDING MARCH 31, 1919

Though the war ended during the fiscal year 1918-19 the work in connection with the Dominion Parks Branch necessarily was continued throughout the year on a war basis. In other words there were but two main features, the maintenance of the existing roads, bridges, trails, etc., with the minimum of expenditure; and the preparation of plans for extension of the work in future years. Details with respect to the work done are covered in the reports herewith from the superintendents of the individual parks.

Throughout the year the work in connection with the parks service has been planned and carried out primarily with a view to bringing into Canada a revenue of millions of dollars from foreign tourist traffic. Special attention has been given to this subject because it is recognized that on account of the war debt it is vital that Canada should concentrate on the development of revenue producing activities.

The object lesson of Switzerland and other European countries has taught the world that outstanding scenic and recreation areas are as distinctly natural resources as timber, minerals or agricultural crops, and that trade (tourist traffic) in them is capable of producing national revenue just as successfully as trade in any of the other natural assets.

A celebrated English Alpinist asserted some years ago that Canada's mountain areas are destined to become "the playground of the world." Canada's national parks contain the most attractive portions of the mountains and therefore are the potential "playground of the world."

The planning of parks work has been based upon an analysis of the tourist business of preceding years.

Publicity experts at the Pacific Coast estimate at \$350 the average expenditure of each foreign tourist. But allowing for an expenditure by each foreign visitor to the Rockies of only \$250, and this includes the ever-increasing numbers who remain the entire season and spend many times that much and those who go out with pack trains to the outlying portions of the park who often spend thousands, it is clear that the money brought into Canada by these visitors reaches a very large sum. Take the year 1915, the last year in which owing to war conditions there was a heavy tourist travel from the States. The number of visitors to Rocky Mountains Park in that year was approximately 90,000. Over 65,000 of these visitors were foreigners. Allowing for an expenditure of \$250 each it follows that over \$16,000,000 of foreign money was brought into Canada by the people of other countries who were attracted to this park, which is just the same as if we had exported goods to those countries and received money in return. Now it is interesting to compare the value on an acreage basis of our exports of wheat with what we may call our export in scenery. The acreage of Rocky Mountains Park in 1915 was 1,800 square miles, or 1,152,000 acres, and the value of the foreign tourist traffic it attracted was roughly speaking \$16,000,000. This works out to a per acreage value of \$13.88.

The total wheat exports for the same year were valued (according to figures furnished by the Department of Customs) at \$74,293,548. The number of acres under wheat cultivation in all Canada were 15,109,415 which means that the value of our wheat exported that year was equivalent to \$4.91 per acre. That is, our export of scenery per acre in Rocky Mountains Park was equal to almost three times the acreage value of our exportable wheat surplus.

This does not take into account the money which was kept in Canada by the 24,000 Canadians who took their holidays in the parks in that year and which would add another \$2,000,000 or \$3,000,000 to the total.

It must be remembered, however, that the tourist possibilities of our Canadian parks have not yet been much more than scratched. The revenues derived represent only a small percentage of their possible production, and as I have pointed out before, the sale of scenery never diminishes the capital stock. When we sell a bushel of wheat we sell so much of the constituents of the soil, so many nitrates, so many phosphates, etc., which leaves the soil poorer, but when we dispense scenery we are like the two old people in the Greek fairy tale who entertained Jove and his son. No matter how much we give our guests there is still as much wine left in the pitcher. The dispensers of all other natural commodities are bound in the end, unless they partially replace what they sell, to find themselves in the unfortunate position of Mother Hubbard.

It is scarcely realized how large a sum this loss to the country through the exports of foodstuffs represents. Ferguson Meade, editor of the *Southern Planter*, in an article in the *American Review of Reviews* for April, 1919, is authority for the statement that every time we export a bushel of wheat we export 60 cents' worth of the chemical constituents of the soil which form the food of plants. Now, in 1918, we exported 150,392,937 bushels of wheat and 9,931,148 barrels of wheat flour, which represents another 45½ million bushels, or approximately 196,000,000 in all.

On the above basis this represents a loss to the country of the fertility of the soil in one year of \$117,500,000 for wheat crops alone. The export of other foodstuffs represents a similar loss in varying degrees.

On the other hand, once national scenery is set aside and protected and opened up for public enjoyment, as it is in our national parks, it tends to increase in value, and the more it is used the more valuable it becomes, because tourists who are delighted with their visit not only decide to come again, but they go home and tell their friends and acquaintances to come too, and the tendency each year, as the parks become better known, is for the traffic to keep on growing.

The Parks Service calculations in regard to the revenue potentialities of the parks have a special application to the rapidly developing difficulties in regard to adverse balance of trade, especially as the great bulk of Canada's foreign tourist traffic comes from the United States. It will be remembered that during the past three years, in order to restore our balance of trade with the United States, it has been necessary to establish credits there by means of loans. With this in view, Sir Thomas White, in 1915, floated a loan for \$45,000,000 in New York, and in 1916 a similar loan was floated for \$75,000,000, or an average of \$60,000,000 for the two years. Now, it is quite clear that the same end could be gained by increasing tourist traffic to Canada from the United States. If we could attract \$60,000,000 worth of tourist traffic to Canada from the United States each year, and this should not be difficult when it is remembered that the tourist traffic of Maine is valued at \$40,000,000 we could wipe out our unfavourable balance of trade.

There is another matter in regard to which tourist traffic is of special significance to the Dominion:

The annual interest due on the loans floated by the Government for war purposes is \$72,500,000. This seems an enormous sum, but it is less than half the sum derived in one year by Switzerland from tourist traffic in pre-war days. Canada's mountain area is roughly estimated at 200,000 square miles. The area of Switzerland is only about 15,000 square miles.

The possibilities of Canada's mountains and in addition of Canada's recreational areas elsewhere have forced the Parks Service to the conclusion that all its work must be developed primarily with the view to promoting tourist traffic because it appears to offer a very effective means of helping meet the country's financial conditions.

VISITORS TO ROCKY MOUNTAINS PARK.

The number of Canadian and foreign visitors registered at the Rocky Mountains Park during the past seven years, are as follows:—

Season.	Canadian.	Foreign.	Total.
1911-12..	30,000	43,725	73,725
1912-13..	45,709	30,173	75,882
1913-14..	32,881	15,016	47,897
1915-16..	24,503	65,504	90,007
1916-17..	36,978	20,272	57,250
1917-18..	46,033	21,746	67,779
	<hr/> 216,104	<hr/> 196,436	<hr/> 412,540

Estimated on a basis of \$250 expenditure for each foreign tourist and \$100 for each Canadian this means that the Canadian parks attracted over \$49,000,000 of foreign money in these seven years and \$21,000,000 Canadian or a total revenue of \$70,000,000. The total appropriations for parks in this period were about \$2,500,000. This represents a return of over twenty-seven times the capital invested.

The figures and calculations recited above are given for the purpose of directing attention to the financial potentialities of an active policy of development in regard to National Parks and general tourist traffic. Canada naturally looks to the United States for the bulk of its foreign tourist traffic.

Lest it should be imagined that Canada has no competition in this tourist business attention is called to the very active campaign carried on in the United States—"The See America First" movement—for the purpose of keeping the American tourist in the United States.

Printers' Ink, New York, March 27, 1919, a publication devoted to the advertising interests is authority for the statement that an advertising appropriation said to be in the neighbourhood of \$800,000 has been decided upon by the Railroad Administration for the purpose of increasing tourist travel during the coming season. Gerret Fort, Assistant Director, in an interview with *Printers' Ink* with regard to the above said it was intended to devote approximately one-half of the above sum to the encouragement of tourist traffic to the American National Parks and the Pacific Coast.

MOTOR TRAVEL.

The most gratifying feature with regard to tourist traffic to the parks during the past year has been the marked increase in travel by motor. In the parks which can be reached only by railway there was a noticeable decrease in the number of visitors, but the three parks accessible by motor road had a most successful season. Buffalo and Waterton Lakes Parks showed an increase of almost one hundred per cent, while Banff, which was expected to suffer from the falling off of railway travel, owing to the large number of motorists from the prairies, had a very satisfactory season. While a large percentage of cars came from Calgary, there was also a considerable number from Edmonton, Regina and adjacent towns, as well as from Winnipeg and from Montana.

This shows how wide is the field from which motor travel to the parks may be drawn, and indicates the enormous possibilities involved in this form of traffic. A large increase in motor travel from year to year can confidently be looked for, and it follows that additional attention will have to be paid to the construction and maintenance of high class roads and to provision for the accommodation of this class of visitor.

The development in motor travel from the prairies has one most gratifying aspect and that is it indicates that the wonderful natural parks of the Rockies are now within reach of the people of the prairie provinces. In the past it has been a matter of regret

that situated as they were, the parks could not serve all the people of Canada. With the coming of good roads and the low priced automobile, they are within easy reach of practically half of the country. They seem destined to become the future playground for a large part of the west.

WILD LIFE IN THE PARKS.

The great abundance of all forms of wild life in the parks is very satisfactory. It shows that sanctuaries properly and fearlessly administered will inevitably result not only in the preservation but in the very large increase of all species of wild life. In the parks to-day the visitor does not need to be told that wild life is abundant. He meets with evidence of the fact wherever he goes.

The Bighorn sheep has now become so plentiful that sometimes between two and three hundred are seen in one flock. A motorist along the motor highway west of Banff counted over 350 in one week-end last April. They have also become so tame that cars sometimes have to slow up to let the sheep off the road. The deer, black bear, goat,



Photo by D. McCOWAN.

On the National Motor Highway.

The wild sheep have become so tame in Rocky Mountains Park that they will stand to let motorists take their picture.

elk, beaver and game birds such as ptarmigan, grouse, ducks, geese and swans are also increasing rapidly. The acting superintendent of Waterton Lakes Park reports that elk are making their appearance in that district and that moose tracks have also been observed.

There seems no doubt that wild life has discovered for itself that the parks are sanctuaries. Wardens who patrol the outlying districts report that as soon as the hunting season arrives all the wild life they meet is invariably headed in the direction of the park. Ducks and geese sometimes stay several weeks during migrations and one of the wardens in Jasper reports that they are evidently going to make a breeding ground of the marshes in that park.

Despite the great area of the parks, there is very little poaching. This is probably due to the very stringent way in which the regulations have been enforced, but it also

indicates that the public soon become educated as to the sanctity of the parks from a wild life standpoint. There is good evidence to show that even the Indians have now become educated with respect to park boundaries, and very few attempted infractions of the regulations have occurred.

We have been very fortunate in developing a game warden service which possesses an enthusiastic love for wild life and the success of the game protection policy is undoubtedly due to their fearless and relentless enforcement of the regulations, as well as to their active pursuit of predatory animals, such as coyotes.

BUFFALO.

The buffalo herds in Buffalo and Elk Island parks continue to thrive and to increase in a most satisfactory manner. There are now about 3,800 in the total herd, and I am advised by the superintendent that the number will have reached 4,000 by the fall. This is an increase of 3,300 in ten years, or almost 500 per cent. The herd is now so large that it seems advisable to consider making some disposal of the surplus males and it is probable that the question of placing a certain number on the market for meat purposes will be considered in the near future.

The cross-breeding experiments being carried on by the director of Experimental Farms at Buffalo Park are producing most interesting results, an account of which will no doubt be published by the Department of Agriculture in due time.

DESTRUCTION OF NOXIOUS ANIMALS.

In Buffalo Park during the past few years coyotes have become a serious menace. They have not only been attacking the bird and animal life in the park itself but were using the park for sanctuary purposes after committing depredations on adjacent farms and settlements. Last year it was decided to make use of trained hounds for the purpose of extermination and about 65 coyotes were destroyed, or nearly three times as many as had been secured by traps during the previous year. This method was therefore continued during the present year and 81 coyotes were killed by the hounds. A gratifying feature is, that of this number, 61 were females. The marked superiority of this method is shown by the fact that only two coyotes were captured in traps during the same period.

In connection with the buffalo herd at Elk Island Park, it is interesting to note that these animals, which were originally of the same stock as those in Buffalo Park are developing under the different environment noticeably different characteristics both structurally and as regards colouration. A veterinary inspector of the Health of Animals Branch reports that their heads are finer and the fore and hind quarters better developed. The skins are also much darker, the long hair on the fore part of the body being black and lustrous. This would seem to indicate that the environment at Elk Island, which affords plenty of shade and possibly more nutritious herbage than that found on the plains, or at Wainwright, is producing a type similar to the wood bison of the far north, whose habitat lies among thick forests. This may have some bearing if a policy of the commercial disposal of the buffalo is developed.

PUBLICITY.

Owing to the reduced appropriation the publication of new literature with regard to the National Parks has not been possible. The manuscript for several publications with regard to the fossils, butterflies, moths and other features of the parks have been prepared and are only waiting for the necessary appropriation. It is hoped that their publication will be possible next year as the editions of practically all literature in stock are now almost exhausted.

The most valuable publicity given the parks during the year was that secured through co-operation with the Exhibits and Publicity Branch of the Department of

Trade and Commerce, which featured the national parks in its motion pictures and lecture programme. A number of very fine films of the parks were secured by them and sent out through exchanges practically all over the country. These will also appear in the United States and England, France and other European countries as well as in Australia and New Zealand.



Photo by D. McCOWAN, Banff.

Mule Deer in Rocky Mountains Park.

The coloured slides, of which the parks' branch now owns a large collection, were almost constantly in demand and a large number of loans were made to church and other organizations. A set of coloured slides was also sent to Dr. McPhail for the use of the Khaki University overseas.

A large number of photographs have been sent out to magazine writers and others and articles and material prepared for the press.

NORTHWEST GAME ACT.

Regulations under the new Act concerning game in the Northwest Territories were passed in May, 1918, and since that time the Mounted Police have been fully

instructed in the new law and are enforcing it with gratifying results. The detailed and valuable reports concerning wild life conditions in the Northwest Territories which are received from the Mounted Police are most valuable and officers and men cannot be too highly commended for the attention paid to this matter.

The new regulations and Act provide a modern system of protection for the valuable fur and game resources. Foreigners are prevented from exploiting the north, by a graded license system which serves the purpose of a deterrent to irresponsible parties and at the same time informs the police, who issue the licenses, of the presence and location of all hunters and trappers.

The license fees are merely nominal for bona fide residents of the Territories and no license is required by native-born Indians, Eskimos or resident half-breeds.

Hunting or trapping on Victoria island is forbidden to license holders.

A system of returns showing number of game or fur-bearing animals taken under each license is provided for and it is hoped that these returns will furnish a valuable guide to the status of the important species in any year.

A small revenue is derived from the license fees, and in the fiscal year 1918-19 the returns, incomplete as yet, amounted to \$1,202.

During the fiscal year 1918-19, \$3,980 was paid in wolf bounties. This amount will doubtless be increased by later returns from the Royal Northwest Mounted Police.

MIGRATORY BIRDS' CONVENTION ACT.

On April 23, 1918, regulations under the Migratory Birds' Convention Act were passed and the Act became operative. From this time steps were taken to acquaint the public with the provisions of the Act, as they applied to the various provinces in Canada.

Work was carried on through the summer by Dr. R. M. Anderson, of the Geological Survey, in the investigation of suggested sanctuaries through the western provinces. This proved a large undertaking and further work may be required before deciding on the most suitable ones for this purpose.

Point Pelee was created a Dominion Park on May 29, 1918. As Point Pelee is a noted resting place for many species of birds during migration, it will prove a valuable bird sanctuary. Many southern forms of bird and plant life occur in this locality which are not found elsewhere in Canada.

Towards the end of 1918 an ornithologist was appointed to assist in the administration of the Migratory Birds' Convention Act and the Northwest Game Act.

A comprehensive publicity campaign has been organized; pamphlets have been prepared and distributed to the press, schools and generally throughout Canada; lectures with motion pictures and coloured lantern slides have been prepared for outsiders, or given by members of the staff. A very successful series of lectures was delivered at the Central Canada Exhibition during the fall of 1918.

The response to our campaign has been excellent. The press have reprinted the published pamphlets very generally in all parts of Canada, and the printing of these articles has served as an impetus to correspondence from the public to the press concerning bird protection.

It was found necessary early in the year to organize a Federal warden service to enforce the Act in the Maritime Provinces. Due publicity was given to the inauguration of this service in the press, and in addition the public was warned by posters that the Federal bird law would be enforced.

In Quebec three bird sanctuaries have been created by the provincial and Dominion Governments, viz.: Bonaventure Island, Perce Rock, and the Great Bird Rocks. These will afford protection to the gannets and other sea birds while they are nesting.

Permits to collect birds for scientific purposes were issued to fifteen ornithologists during the year 1918. The number of permits will be greater during 1919, because the publicity campaign has reached many collectors who did not apply for permits during the first year the regulations were in force.

WILD LIFE CONVENTION.

In February, 1919, an important conference on Wild Life Protection, the first of its kind in Canada, was held under the auspices of the Commission of Conservation and the Advisory Board on Wild Life Protection.

Many important points were discussed and the foundation was laid for better co-operation and understanding between the provinces and between the provincial and Dominion Governments. Several prominent wild life conservationists from the United States addressed the meetings and their presence indicated the spirit of co-operation which was developing between the United States and Canada in wild life protection.

ANTELOPE.

The antelope herd at Foremost, Saskatchewan, is thriving and shows a most satisfactory increase. This is by all odds the most successful effort yet made in Canada to breed antelope in captivity. About three years ago fifty antelope were enclosed and the last count shows about seventy-five.

It is believed that the thriving condition of the herd is due to the fact that the reserve contains all the medicinal plants and mineral deposits required to keep the animals in a healthy condition. Probably these plants and minerals were absent from Buffalo Park and the other reserves where attempts to breed antelope proved unsuccessful.

AGREEMENT WITH BRITISH COLUMBIA.

An important agreement was made during the year between the province of British Columbia and the Dominion. By it the province granted to the Dominion for parks purposes a strip of land ten miles wide, extending from Sinclair Creek in the Columbia Valley eastward to the Alberta boundary, an area of approximately 350,000 acres.

The Province also agreed to a satisfactory adjustment of the many outstanding conflicts of jurisdiction within Dominion Parks in British Columbia. In return the Dominion undertook to complete the construction of the Banff-Windermere auto road, which when finished will provide one of the most spectacular auto roads on the continent. The agreement is published in detail as an appendix to this report.

AGREEMENT WITH ALBERTA.

For some years there have been conflicts of jurisdiction as between the Province of Alberta and the Dominion in regard to parks situated in Alberta. An agreement with Alberta was executed satisfactorily adjusting these conflicts. The agreement is printed as Appendix 12 of this report.

J. B. HARKIN.

APPENDIX N^o. 1.REPORT OF THE SUPERINTENDENT OF ROCKY MOUNTAINS PARK,
J. M. WARDLE.

Two or three years ago the prospects of a successful season for the Rocky Mountains Park in the fifth summer of the world-wide war would have been hopelessly discounted. Nevertheless the season of 1918 was far from being an unsuccessful one, and the number of visitors to the most developed of our National Parks speaks well for its attractiveness and popularity. While war's continued demands and conditions prevented many visitors from travelling, the undoubted need for recreation in trying times led many people to the Rocky Mountains Park to rest and gain new life and vigour from her quiet valleys and inspiring peaks.

MOTOR TRAVEL.

The last two years have more than vindicated the decision of the Department to allow automobiles within the park. War conditions, coupled with restrictions on



Photo by BYRON HARMON.

The "Three Sisters," near Canmore, Rocky Mountains Park.

travel by rail and greatly increased passenger rates, brought the number of visitors travelling by rail to a minimum. The number of motorists, however, showed a further increase over last year, and the success of the past season is due entirely to this class of visitor. Without the motor cars, the season, particularly for Banff, might have proved disastrous. As it was, during the summer months the town was continually filled with motoring visitors from all parts of the Prairie Provinces and accommodation was frequently overtaxed. While a large percentage of visiting cars came from Calgary, cars were also noticed from Edmonton, Regina, and adjacent towns—from Winnipeg and from Montana, Minnesota and other states.

The indications are unmistakable that in the future the motorists will comprise the majority of our park visitors. The close of the war will, it is hoped, soon increase the travel by rail to the heights reached in pre-war days, but there will doubtless be a corresponding increase in motor traffic.

During the past year the roads in the park were generally in good condition. Exceptionally dry weather in the early summer resulted in the light materials in the roads west of Banff being badly cut up in sections, but a few days' rain in August assisted in getting these roads into good shape again.

The weather throughout the season was remarkably fine. For some reason motorists show a disinclination to visit the mountains in September or October. These months are, as a rule, the finest of the year in the Rocky Mountains Park. All winged pests are gone, roads are good, the autumn colouring is beautiful, and the crisp pure air combines to give a freshness and enjoyment to motoring only possible in the autumn months.

Rocky Mountains Park suffered comparatively little in the summer freshet of 1918. Bright sunshine in the early spring melted gradually the snows in the tributary valleys of the Bow that usually cause most damage to our roads and bridges. The Bow river itself reached a high stage in the middle of June, causing trouble along the railway lines both east and west of Banff.

Following the war policy laid down for the different departments, no new work was opened up during the year. Necessary maintenance work was undertaken, and considerable improvement was made in the eastern extremity of the motor road between Banff and Kananaskis. This latter work was considerably curtailed through lack of labour, and on that account, although continued nearly a month later than usual, to December 1, was not completed.

AUTOMOBILES.

It is pleasing to note that another increase in motor traffic over previous years was experienced. During the week ends the officials registering the automobiles at the Entrance Arch were very often taxed to keep their work running smoothly and the cars recorded and passed in without undue delay.

During the year the following automobile licenses were issued:—

Private cars..	103
Livery cars..	60
Transient cars..	2,231
Total..	<u>2,394</u>

BANFF TOWNSITE.

The work undertaken by the department in the Banff townsite chiefly consisted in keeping in repair the various streets, and the water and sewer services in the town. The surface of Banff avenue was repaired in the fall, and one or two other streets were surfaced with gravel.

CAMP SITE.

The camping grounds, reserved along the Spray river and Golf Links road, were again well patronized. Every week end saw motor cars from various parts of the prairie provinces, laden with camping equipment, en route to the camp site.

Frequent visits by the sanitary inspector and the regular collection of garbage and rubbish kept the camp site clean and attractive in appearance. During the year 57 camping permits were issued, and as there were from three to five persons in the average camping party it is estimated that there was a total of some 230 campers during the season. Several parties stayed for over a month and others remained in camp until the end of October.

FIRE BRIGADE.

The Banff volunteer fire brigade responded to nine calls. All of these were for fires in frame buildings, only one being in the first class fire district. Through the promptness and efficiency of the brigade and with the aid of up-to-date equipment furnished by the department, none of the fires proved serious. The total loss through fires is estimated at \$2,800.

ANIMAL ENCLOSURES AND ZOO.

Owing to a large increase in the elk, we were able to turn out 41 of these animals early in the summer to shift for themselves. This was done with some difficulty, as the elk showed a disinclination to leave their quarters. Those turned out were seen occasionally during the summer north of Bankhead and in the vicinity of lake Minnewanka, and during the fall several attempted to break through the fence back into the enclosure.



Buffalo at Banff, Rocky Mountains park.

The dryness of the early summer months resulted in a shortage of pasture in the smaller enclosures and necessitated the enlargement of the goat pasture.

A shelter for the yak was erected in their enclosure in the fall. This building is of suitable design and has sufficient accommodation for some forty or fifty yak.

GOVERNMENT BATHS.

During the summer months the Cave and Basin is one of the most popular resorts in Banff, as is shown by the patronage of a very high percentage of the total number of visitors to the park.

A large percentage of the visitors to the Upper Hot Springs take the baths for their curative properties, and the total number of visitors for the past year was very gratifying.

VISITORS.

Among the early visitors to Banff and the park were the International Fishery Commission, headed by Mr. W. A. Found. The commission spent one day in Banff in May, and were extended the courtesies of the park.

Major-General Sir Louis Jackson visited Banff towards the end of June and expressed himself delighted with the different drives and various points of interest.

In September Baron Shaughnessy spent two days in Banff, being a patron of the Golf Links during his visit.

In October, Prince Fushimi of Japan, who represented Japan in several international conferences, with his staff spent half a day in Banff, and was an interested visitor to the museum, zoo, and buffalo paddock.

Early in August, Banff was honoured by an informal visit from Prince Arthur of Connaught. Escort was provided for him by the Royal Northwest Mounted Police, some additional men being brought up from Calgary to augment the local detachment.

Prince Arthur visited all the points of interest in Banff and the vicinity, and also played several rounds on the golf links.

Sixty-eight grazing permits were issued during the year and covered the grazing of 138 horses and 212 cows.

CANMORE.

A much needed protection to the Canmore townsite from the Bow river was afforded by the construction of a timber river-wall, backfilled with rock, along the north bank of the Bow adjacent to the townsite. The former row of piles protecting the river bank at this point was badly weakened through decay and had given away at several points.

The main street of Canmore was improved during the summer by removing the stones and boulders.

LAKE LOUISE.

The great advantage of being connected to outer points by motor roads was emphasized by the quiet season at Lake Louise as compared with that at Banff. The former is entirely dependent for a successful season, on tourists travelling by rail, and various war conditions and restrictions combined to reduce the number of visitors to this attractive spot.

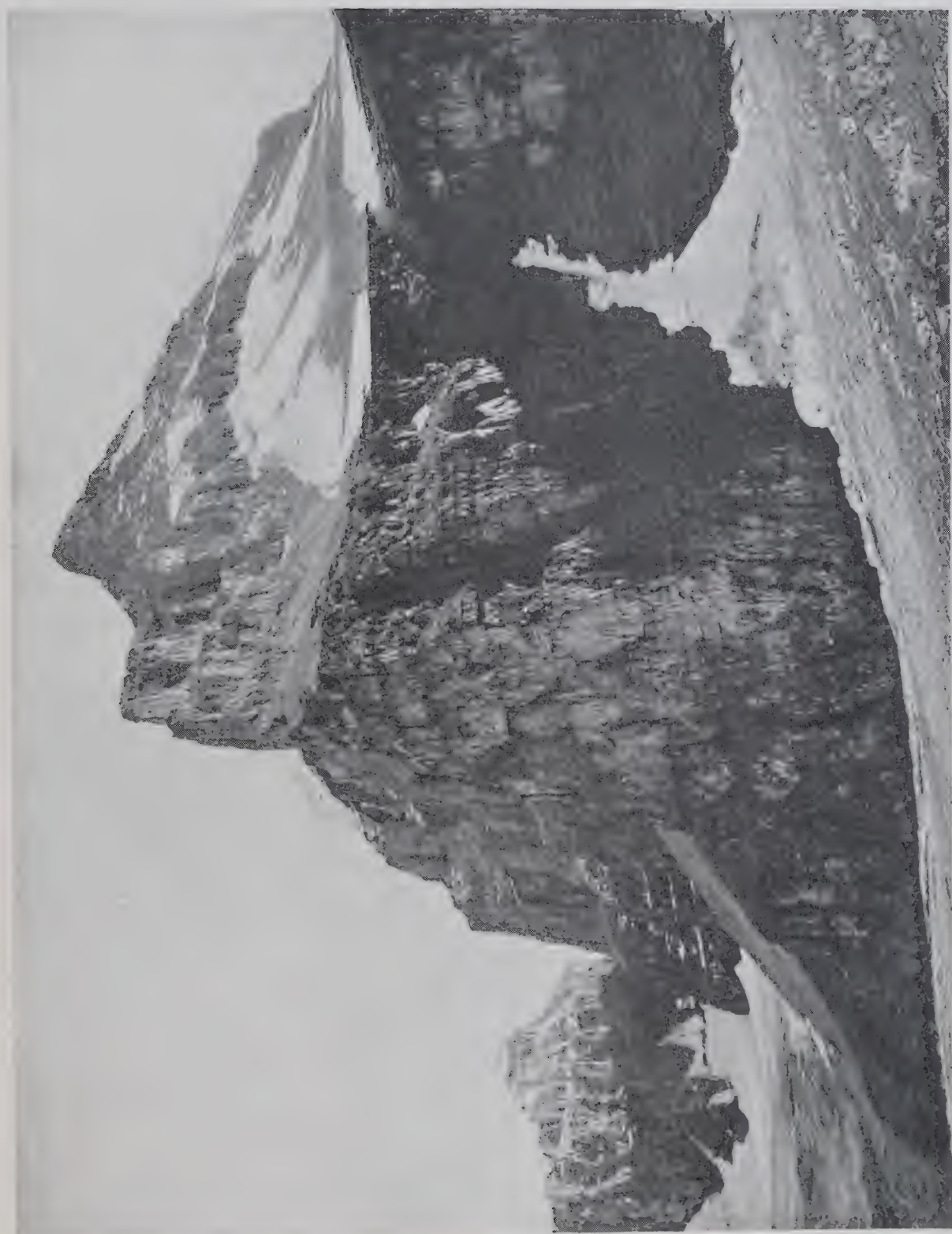
The Moraine Lake drive was again deservedly popular, a regular automobile service to the lake being operated by a transport company.

During the busy season a camp was maintained at the lake for the benefit of tourists and others wishing to spend a few days there, or to make it their headquarters for fishing and other trips.

During the season a new tea house was opened on the summit of the big "Beehive Mountain," at an altitude of 7,430 feet. This is one of the highest refreshment stands in America, being 550 feet above the tea room at lake Agnes. The east windows overlook a sheer drop of 780 feet to Mirror lake, while the southern exposure overlooks a greater though less precipitous drop of 1,760 feet to lake Louise. The "Beehive" tea room is reached by a continuation of the trail to lake Agnes.

HEALTH.

In common with other points of the American continent, the Rocky Mountains park was visited in the fall and winter of 1918-19 by the world-wide epidemic of influenza. Fortunately the clear dry air and the healthy surroundings combined to greatly reduce the severity of the attacks. The mortality was also considerably below the average percentage for the rest of the country. From the figures obtained from the medical officer for the park, the mortality was only 3.3 per hundred cases.



Mt. Victoria and Victoria Glacier, foot of Lake Louise.

MOUNTED POLICE.

During the greater part of 1917, civil and criminal law in the park has been administered by the provincial authorities. The past year saw the re-establishment of the Royal Northwest Mounted Police in the park, for the maintenance of order and the enforcing of the various park regulations. The Banff detachment assumed their duties early in June.

APPENDIX 1a.

NATIONALITIES OF VISITORS TO ROCKY MOUNTAINS PARK FROM
APRIL 1, 1918, TO MARCH 31, 1919.

VISITORS REGISTERED AT THE CAVE
AND BASIN.

Canada.. . . .	11,964
United States.. . . .	5,091
England.. . . .	192
Scotland.. . . .	158
Ireland.. . . .	42
Wales.. . . .	13
Australia.. . . .	319
New Zealand.. . . .	149
Tasmania.. . . .	28
India.. . . .	34
Holland.. . . .	4
France.. . . .	18
China.. . . .	13
Malay States.. . . .	5
Straits Settlements.. . . .	21
Phillipine Islands.. . . .	7
South Africa.. . . .	3
British West Indies.. . . .	11
Portugal.. . . .	4
Japan.. . . .	37
Korea.. . . .	15
South Sea Islands.. . . .	5
Hawaian.. . . .	5

Total.. . . . 18,138

Paying bathers.. . . .	31,662
Bathers with passes.. . . .	576

32,238

NUMBER OF BATHERS AT UPPER HOT
SPRINGS, April 1, 1918, to March 31, 1919.

Canada.. . . .	24,346
United States.. . . .	240
England.. . . .	56
Scotland.. . . .	26
Ireland.. . . .	10
Italy.. . . .	8
Australia.. . . .	12

Total.. . . . 24,698

Total number of bathers at Cave and Basin
and Upper Hot Springs, 56,936.

Canada.

Alberta.. . . .	2,462
British Columbia.. . . .	302
Manitoba.. . . .	658
New Brunswick.. . . .	11
Nova Scotia.. . . .	15
Ontario.. . . .	586
Quebec.. . . .	210
Saskatchewan.. . . .	290
Prince Edward Island	2

GUESTS VISITING BANFF SPRINGS
HOTEL, Season 1919, May 15 to September
30.

United States.

Alabama.. . . .	2
Arizona.. . . .	....
Arkansas.. . . .	1
California.. . . .	234
Connecticut.. . . .	19
Colorado.. . . .	2
Delaware.. . . .	9
District of Columbia.. . . .	33
Florida.. . . .	2
Georgia.. . . .	12
Illinois.. . . .	252
Idaho.. . . .	3
Indiana.. . . .	26
Iowa.. . . .	33
Kansas.. . . .	19
Kentucky.. . . .	2
Louisiana.. . . .	9
Maine.. . . .	13
Minnesota.. . . .	114
Mississippi.. . . .	6
Missouri.. . . .	81
Montana.. . . .	31
Massachusetts.. . . .	105
Maryland.. . . .	23
Michigan.. . . .	66
New York.. . . .	421
New Jersey.. . . .	37
New Hampshire.. . . .	4
North Carolina.. . . .	3
Nevada.. . . .	4
North Dakota.. . . .	10
Nebraska.. . . .	18
New Mexico.. . . .	3
Ohio.. . . .	91
Oklahoma.. . . .	18
Oregon.. . . .	27
Pennsylvania.. . . .	123
Rhode Island.. . . .	20
South Carolina.. . . .	2
South Dakota.. . . .	1
Texas.. . . .	13
Tennessee.. . . .	7
Utah.. . . .	1
Virginia.. . . .	2
Vermont.. . . .	17
Washington.. . . .	85
Wisconsin.. . . .	45
West Virginia.. . . .	2
Wyoming.. . . .	....

Foreign countries.

Alaska.. . . .	10
Australia.. . . .	142
Africa.. . . .	1
Borneo.. . . .	3
British Guiana.. . . .	2

GUESTS VISITING BANFF SPRINGS STATEMENT OF PERSONS REGISTERED
HOTEL, Season 1919, May 15 to September 30.—*Concluded.* AT CHATEAU LAKE LOUISE, LAKE
LOUISE, ALTA.—Season 1918—*Con.*

Foreign countries.—Con.

Foreign countries.—Con.		1918.	1917.	
Burma..	3	Pennsylvania..	50	92
China..	23	(Pittsburg)...	37	91
Ceylon..	3	(Philadelphia)...	82	202
Egypt..	1	New Jersey..	68	183
England..	60	Delaware..	10	4
France..	4	Maryland..	22	34
Fiji Islands..	2	District of Columbia..	34	51
Hawaii..	7	West Virginia..	7	23
Honolulu..	18	Virginia..	5	25
India..	1			
Japan..	24	Total..	959	2,393
Jamaica..	2			
Java..	1	Decrease..	1,434	
Manila..	....		
Mexico..	1	Kentucky..	6	36
Malay Straits..	2	Tennessee..	9	34
New Zealand..	14	North Carolina..	2	10
Newfoundland..	4	South Carolina..	4	2
Portugal..	3	Georgia..	12	33
Roumania..	1	Alabama..	....	27
Scotland..	6	Mississippi..	2	7
Siam..	2	Louisiana..	18	35
Sweden..	12	Florida..	4	10
Switzerland..	1			
Tasmania..	....	Total..	57	194
Total..	6,939	Decrease..	137	

STATEMENT OF PERSONS REGISTERED
AT CHATEAU LAKE LOUISE, LAKE
LOUISE, ALTA.—Season 1918.

	1918.	1917.			
Manitoba..	17	39	Ohio..	76	200
(Winnipeg)..	205	203	(Cleveland)...	35	75
Saskatchewan..	169	319	(Cincinnati)...	16	63
Alberta..	471	721	Michigan..	114	51
British Columbia..	149	158	(Detroit)...	73	45
			Indiana..	40	62
Total..	1,011	1,440	(Indianapolis)...	15	32
Decrease..	429		Illinois..	53	223
			Chicago..	202	623
Prince Edward Island..	1	3	Iowa..	61	181
Newfoundland..	2	....		
Nova Scotia..	6	17	Total..	685	1,646
New Brunswick..	15	23	Decrease..	961	
Quebec..	110	122			
Ontario..	340	417	Missouri..	20	42
			(St. Louis)...	50	88
Total..	474	582	(Kansas City)...	24	75
Decrease..	108		Kansas..	17	40
Maine..	5	22	Arkansas..	3	11
New Hampshire..	10	4	Oklahoma..	20	39
Vermont..	4	13	Nebraska..	15	49
Massachusetts..	31	181	(Omaha)...	12	38
(Boston)...	74	192	Texas..	4	79
Connecticut..	29	87			
Rhode Island..	14	42	Total..	165	461
New York State..	91	235	Decrease..	296	
(New York City)...	336	908			
			Wisconsin..	49	96
			(Milwaukee)...	22	60
			Minnesota..	23	50
			Minneapolis)...	91	222
			(St. Paul)...	34	54
			North Dakota..	9	43
			South Dakota..	9	10
			Total..	237	535
			Decrease..	298	

STATEMENT OF PERSONS REGISTERED
AT CHATEAU LAKE LOUISE, LAKE
LOUISE, ALTA.—Season 1918—*Con.*

	1918.	1917.
Washington.. . . .	183	208
Oregon.. . . .	65	123
California.. . . .	103	466
(San Francisco).. . . .	107	276
(Los Angeles).. . . .	60	243
Nevada.. . . .	6	8
Total.. . . .	524	1,324
Decrease.. . . .	800	

Montana.. . . .	12	6
Idaho.. . . .	1	10
Wyoming.. . . .	...	1
Colorado.. . . .	2	16
Utah.. . . .	2	...
Arizona.. . . .	...	6
Total.. . . .	17	49
Decrease.. . . .	32	

West Indies.. . . .	4	5
Mexico and Central America..	1	1
South America.. . . .	4	4
Total.. . . .	9	10
Decrease.. . . .	1	

England.. . . .	40	34
Ireland.. . . .	...	2
Scotland.. . . .	3	3
France.. . . .	1	2
Holland.. . . .	...	65
Other European countries..	12	14
Total.. . . .	56	120
Decrease.. . . .	64	

Australia.. . . .	90	66
New Zealand.. . . .	20	50
China.. . . .	41	60
India.. . . .	14	11
Hawaii.. . . .	15	35
Phillipine Islands	2	12
Africa.. . . .	3	7
Japan.. . . .	18	17
Straits Settlements.. . . .	4	10
Total.. . . .	207	268
Decrease.. . . .	61	

CONDUCTED PARTIES (otherwise unal-
located).

	1918.	1917.
Raymond & Whitcomb.. . . .	...	10
G. K. & B.. . . .	...	52
Various.. . . .	13	20
Total.. . . .	13	82
Decrease.. . . .	69	
Unallocated.. . . .	41	61
Total.. . . .	4,454	9,155
Decrease.. . . .	4,701	

KING EDWARD HOTEL (open all year).

Canada.. . . .	4,594
United States.. . . .	334
England.. . . .	45
Scotland.. . . .	4
Australia.. . . .	82
New Zealand.. . . .	6
India.. . . .	2
France.. . . .	3
Holland.. . . .	4
Norway.. . . .	1
Japan.. . . .	2
China.. . . .	8
	5,085

HOMESTEAD HOTEL (open May 4 to Sept.
29).

Canada.. . . .	2,090
United States.. . . .	80
South Africa.. . . .	7
France.. . . .	2
	2,179

24,420 meals were served at this hotel.

MOUNT ROYAL HOTEL (open May 15 to
Oct. 15).

Canada.. . . .	2,815
United States.. . . .	250
England.. . . .	5
Australia.. . . .	7
New Zealand.. . . .	2
Other countries.. . . .	15
	3,094

ALBERTA HOTEL (open April 1 to Nov. 13).

Canada.. . . .	1,900
United States.. . . .	20
Other countries.. . . .	5
	1,925

UPPER HOT SPRINGS HOTEL (open all
year).

Canada.. . . .	620
United States.. . . .	18
Other countries.. . . .	4
	642

SUMMARY.

Banff Springs Hotel.. . . .	6,940
Chateau Lake Louise.. . . .	4,454
King Edward Hotel.. . . .	5,085
Mount Royal Hotel.. . . .	3,094
Homestead Hotel.. . . .	2,179
Alberta Hotel.. . . .	1,925
Upper Hot Springs Hotel.. . . .	642
Summer cottagers and campers..	6,000
Motorists.. . . .	11,500
	41,819

APPENDIX 1b.

REPORT OF THE CURATOR OF BANFF MUSEUM, N. B. SANSON.

Several trips were made for the purpose of exploring and collecting specimens for the museum. Interesting photographs were taken of animal and vegetable life and also of mountain scenery, which are to be placed on exhibition. Collections of insects, spiders, birds, fossils and plants were made in different localities in the park.

A specimen of *Hepialus* (*Hyperhoreus*), very rare, was collected. There are only three of these specimens in the world, one in the United States and one in the collection of Mr. Bowman, of Edmonton.

Some time was spent in searching for *Grylloblatta*, but only one adult and three immature specimens were secured on Sulphur mountain.

BIRDS.

White winged crossbills have been seen about now and again this winter. The red plumage of the male is unusually beautiful.

Clarke's nutcrackers are still less numerous than usual and the Canada jay is seldom seen now about Banff.

Thousands of *Vanessa Californica* (the California tortoise shell) appeared about Banff. This is thought to have been due to the unusually fine weather during the summer.

Wild and cultivated plants were blooming in October last year owing to the exceptionally fine autumn.

GENERAL INFORMATION WITH REGARD TO WEATHER CONDITIONS AT BANFF.

The weather for the year ending March 31, 1919, showed some marked exceptions to all previous records. November and December, 1918, and January 1919, were comparatively mild months. In November the temperatures of zero and below occurred twice. In December temperatures of zero and below occurred five times. In January temperatures of zero and below occurred twice. Part of February and March were cold; in February temperatures of zero and below occurred sixteen times and in March thirteen times. At the end of March there was much more snow on the ground than usual, but sleighing did not start till December 3, continuing until April. The snowfall for this year was about the average, being six feet nine inches to the end of March. The first snowfalls fell on a dry ground before frost had penetrated the ground to any extent. At the end of March there was about four feet of snow near the top of Sulphur mountain, or an average of about two and one-half feet over all the mountain on the level.

The weather of two of the months of the year was specially noticeable. In July, three inches of snow fell, the first reported snow for July since this station was organized.

The following notes with regard to September, a lovely month, may prove of interest:—

Mean temperature 51.8, maximum temperature 78.4, minimum temperature 27.9. There were fifteen temperatures of 70 degrees and over, and only eight temperatures of 32 degrees and lower. Only five days with rain, and no snow, twelve perfect days and seven very fine days. This was the finest September on record.

APPENDIX No. 1c.

THE ALPINE CLUB OF CANADA.

(Report prepared by the Club.)

The Alpine Club House was open during June, July, August, and September, to members and their friends. In common with other features of the national parks it received less patronage than usual owing to war conditions and the exceedingly high railway rates. However, it served to bring the mountain regions of Canada to the consideration of many who needed information. The officials are always ready to help with such knowledge as they possess, any who come, and realize perhaps most of all



Photo, DR. CHAS. WALCOTT.

Looking West and North, Upper Bow Valley from west slope of Dolomite peak.
Mt. Thomson (10,109') cloud-capped in centre.

how much a local guide is needed in Banff thoroughly conversant with and interested in its many attractions. Hotel clerks who spend their brief season in the mountains in hotel corridors cannot know these things however obliging they may be.

Besides the somewhat interesting ascents of Rundle and Cascade, Mount Norquay was several times climbed and declared the most interesting of the moderately difficult climbs in the neighbourhood. The favourite route started directly from the motor road to Castle mountain.

The Bow river becomes more appreciated every year as the trips along the Spray and through the gap to Canmore and round Sulphur mountain coming down into Sundance valley are better known.

It appears to the authorities of the Alpine Club that steady employment could be found for one or even two competent guides stationed at the village of Banff during the summer months. There are many climbs and expeditions of very great interest in the immediate vicinity and an important percentage of the visitors would be glad to make these if suitable guides were available.

For climbs, Mounts Cascade, Rundle, Norquay, Edith, Louis, Aylmer, Inglismaldie, Peechee and Sulphur may be mentioned. For expeditions there are several round trips such as Edith pass, Mystic lake, Johnston creek and canyon, Spray river trail, Canmore gap and home by railway; Sundance canyon, across Sulphur mountain and home by Spray river road. The foregoing may be mentioned as examples, but there are a number of others, all of interest, but needing a competent guide. They can readily be accomplished without the expense of a pack train.

Such guides need not necessarily be Swiss guides. Competent Canadian guides can readily be found. They should be in the employ of the Government and their services be made available from the office of the superintendent.

A word about bears: Owing to the park regulations prohibiting the use of firearms and the running of dogs at large, wild life in the park becomes a feature. Deer walk the streets and feed at the kitchen doors. Bear while not familiar, frequent the outskirts of the village and during the past season did considerable damage at the Alpine Club House, twice entering the pantry and carrying off food, and once breaking a large plate glass window in the assembly room. While it is admitted by those who know well that the brown bear is not absolutely dangerous if left severely alone, still it is not possible to convince strangers that such is the case and the ravages of these animals are a constant fear to our guests and employees when walking the less frequented roads and gathering flowers in the woodland surroundings. Apart from that, it seems that the expense of the damage they do, which has been considerable at the club house during the past few years, has to be borne by the club and it is thought that more adequate protection should be given. Come upon suddenly, or with their young, bears cannot be counted upon to run away and there is always the possibility of a tragedy.

In conclusion it would not be amiss to say a few words concerning the winter sports at Banff. For the past three years the residents of Banff with a true sportsman-like spirit have organized and carried out successfully a winter carnival of sports. Through the good management and hard work of those placed in charge the sports have been made to pay expenses and a goodly attendance has been present throughout the period they were in operation. As a rule the weather is ideal and particularly so during the last carnival when bright blue skies, fleecy white clouds and brilliant sunshine made the wonderful surroundings of snow-clad peaks veritable fairyland.

Skating, snowshoeing, ski-ing, curling and hockey on the ice were the order of the day and of the night; and the atmosphere, climate conditions and general feeling of glorious exhilaration induced by the bright warm winter days at this high altitude could not have been surpassed by the most famous winter resorts of the European Alps.

In addition, the swimming contests in the magnificent Government bathing pools, the annual meet of the gun club, the nightly dances and masquerade balls and the moving pictures of winter sports and other subjects supplied continuous attractions; whilst a handsome ice palace brilliantly illuminated at night provided a centre of attraction.

But it needs more than the efforts of the villagers to make the most of the grand opportunities nature has given to Banff in this respect. The mountain parks, and particularly the Rocky Mountains park, are the property of the Canadian people and are for their benefit first of all. It is therefore appropriate that the Canadian Government and the great corporation of the Canadian Pacific railway should lend all possible

assistance to make the very best of this grand natural asset. Further, it is for the people of Canada to lend their assistance to such splendid features of the mountains that belong to them by participating in the sports, and it is here the railway corporation can best lend assistance by providing rates of travel that will place such wonderful opportunities within reach of the public.

The Alpine Club from the first has clearly heard the call and has participated to the extent of its ability in collaborating with the residents of Banff. It has in each year had its director there as a representative and a number of members have been present. It has also during the past two years presented a handsome silver cup to be competed for by the ladies hockey teams, and will continue to so participate in the future.



Photo, Dr. CHAS. WALCOTT.

Looking South across Bow Lake. Mt. Hector (10,125') on right and Bow Peak on left.

The club wishes in this connection to express a note of appreciation for the good work done by the superintendent of the park who is evidently a good sportsman and who seems to realize the great possibilities that are presented by the beginning of winter sports in the Canadian Rockies as a valuable asset of the present and a still greater one for the future.

APPENDIX No. 1 (d).**REPORT OF THE THIRTEENTH ANNUAL CAMP OF THE ALPINE CLUB
OF CANADA IN PARADISE VALLEY, 1918.**

The thirteenth Annual Camp of the Alpine Club of Canada was held in Paradise valley, on the site of the 1907 camp, from July 15 to July 31. The attendance was smaller than usual owing to war conditions and the high cost of travel.

The situation was a charming one, under the shadow of Mt. Temple, with a fine view of the north wall of Hungabee. At once the visitor realized he was in the heart of the big mountains, the true Rockies of Canada. In connection, an outlying camp was pitched in Consolation valley, a most lovely site.

The weather was truly accommodating. One day a heavy snow storm rendered climbing impossible, but the snow had nearly all disappeared at night. In 1907 Temple and Aberdeen were considered serious climbs. In 1919 they were looked upon as good enough for training, but not the real thing. Mt. Pinnacle and The Mitre were ascended by quite a few parties and one traverse was made up the steep wall from the valley over Ringrose and down to lake O'Hara. Various expeditions were made in the delightful neighbourhood which are well known. One, however, which is new and by no means strenuous, was found to be well worth while. Between Westach pass and Hungabee rises a dome-shaped mountain, slightly under 10,000 feet in altitude, which is easily climbed from the summit of the pass. It is the key to many valleys and commands a superb view.

One of the club members, Mr. V. A. Fynn, made many original variants of familiar climbs from Lake Louise during the season and repaired and equipped at his own expense the hut in the O'Hara meadow. Were the club in a stronger financial position it would do much on such lines to make the mountains more readily available to the people of Canada and other nations.

From the annual meeting a resolution of sympathy and appreciation was sent to the club members on war service, and another of congratulation to its released prisoners.

Two Swiss guides, loaned to the club by the chief of the hotel service of the Canadian Pacific Railway, were in attendance at the camp while in session. Edward Feuz and Christian Hasler have long been friends of the club and its members, and, as always, gave their very best professional services to make the climbing programme a complete success.

There were present members of the English, Swiss and American Alpine Clubs, of the Appalachian Mountain Club and of the Royal Geographical Society.

APPENDIX No. 2.**REPORT OF THE SUPERINTENDENT OF YOHO PARK, E. N. RUSSELL.**

The past year, in spite of the many disadvantageous conditions due to the war, has been a very satisfactory one. Although appropriations were small, labour scarce, and there was a great deal of work to be done to keep the parks up to the standard of their reputation, it was possible to complete the programme of work for the year as laid out, and while there has been no great progress in the way of new development work, all existing roads, trails, buildings and other works have been adequately kept up and are ready for the thousands of tourists who will no doubt wish to visit the parks now that the war is over.

WORK OF THE YEAR.

In addition to the usual spring work in connection with the cleaning up of the townsite of Field, repairing sidewalks and streets, etc., the first work undertaken was the raising and strengthening of the bridge over the Kickinghorse river at Field and the protection work on the creek at the back of the townsite.

The Kickinghorse bridge, a structure about 300 feet in length, was raised about 2 feet for its entire length. This had been rendered necessary by the filling in of the bed of the river, which at this point had recently been built up about 18 inches by deposits of sediment and gravel. The piers were then built up and the two main trusses strengthened. A small spur rock dam was also constructed above the bridge for the purpose of throwing the water over into the main channel again and thus assisting in cutting out the material deposited there.

The protection work on the creek consisted of the building of a log, rock-filled crib, 250 feet in length along the bank of the creek, the throwing up of a gravel embankment for about the same distance and the strengthening of the bank at other points. This work was necessary to protect the townsite from the danger of the creek overflowing its banks. Later on in the season a small truss bridge, 40 feet in length, was erected over the creek on the road from the town to the cemetery.

ROADS.

The repair and maintenance work necessary in connection with roads was not so heavy as usual, due largely to the decreased traffic. The Yoho road required the most attention, about 35 feet of road bed at one spot in the canyon having been completely carried away. Considerable trouble was also experienced about a mile from Field by the flooding of the Kickinghorse river. The latter piece of road was eliminated later in the season by building a diversion along the side hill on higher ground.

Minor repairs were effected on several of the other roads, but only those of an urgent nature were undertaken, as labour was very scarce. For this reason it was found impossible to place sectionmen on the Emerald Lake road as usual and only on the Yoho road for a very short period.

TRAILS.

On the Leancoil trail two new diversions were built in order to avoid the low lying ground in the Kickinghorse valley in which we have experienced considerable trouble on account of high water.

On the Ottertail trail we were unfortunate in losing two bridges over Ottertail creek which were carried away by the high water. Both of these, however, had served their time being over 20 years old. Instead of replacing both these bridges it was decided it would be better to construct a trail up the west bank of the river to the site of the upper crossing and thus eliminate the lower bridge, it having been found impracticable to build the trail along the east bank for the entire distance. This scheme was later satisfactorily carried out.

TELEPHONE LINES.

No new lines were built but the whole of the Field-Ottertail line was taken down and re-strung so as to conform with the regulations of the Canadian Pacific Railway Company on whose poles the line is hung. This also had to be done on the greater portion of the Leancoil-Deer Lodge line, the company's regulations calling for all solid insulators, in place of the split tree insulators which we use.

FIRE AND GAME PROTECTION.

Valuable work was done by the warden service throughout the season. Over 166 miles of trails were cleaned out, maintained and patrolled in addition to their other

duties. No fires of any consequence occurred although the weather for part of the season was very dry and the fire hazard great. The systematic campaign inaugurated by the branch for the purpose of educating the public as to the danger of carelessness with regard to fire in the forest was energetically carried on with all the means at our disposal. The results of this campaign are easily discernible in a more careful use of fire in all its forms on the part of the public frequenting the park.

FISHING.

About 2,000 ouananiche or land-locked salmon fry, were placed in Sherbrooke lake during the season. This lake was chosen for their experimental planting because the Department of the Naval Service particularly desired that a body of water should be selected which was not readily accessible from any hotel or to tourists, and this lake was considered in all respects most suitable.

TOURIST TRAVEL.

As was to be expected tourist travel was unusually small. Now that brighter days are coming, however, it is hoped that the traffic will soon exceed that of the pre-war days and that everything possible will be done to promote what is now recognized to be one of the important revenue producing resources of the Dominion. Probably nothing would tend more to the development of Yoho park than the completion of the main highway, now under construction, between Banff and Field. This would throw open all the beautiful drives in the park to the people of the Prairie Provinces by a direct motor road, and would no doubt result in Field becoming a most popular week-end resort.

HOTELS.

Since the last report the Canadian Pacific Railway Company have turned over the Mount Stephen House at Field to the railway organization of the Y.M.C.A. It is understood, however, that the company intend to erect a more modern hotel at a site to be determined on, which will be farther from the railway line than the present building. In the meantime, it is understood rooms and meals will be available for the tourist in the old building under the management of the Y.M.C.A.

APPENDIX No. 3.

REPORT OF THE SUPERINTENDENT OF GLACIER PARK, E. N. RUSSELL.

As is usual in this park, it was not until the month of June that a start could be made on the general work of the season. The snowfall for the winter 1917-18 was exceptionally heavy, our warden at Glacier recording a total of over 50 feet. As practically no melting takes place, such a heavy fall naturally requires a long time to melt and high water is generally upon us before the snow is all gone. As is to be expected there are always numerous snow slides which bring down large quantities of rock and debris which do considerable damage to the roads, trails and bridges.

As soon as the snow was sufficiently melted, an attempt was made to renew the bridges over Beaver river and Grizzly creek, on the Beaver River trail, but the work had to be abandoned for the time being, owing to a sudden rise in the water. The men were therefore moved over to Glacier and the repairs necessary on the road to the Nakimu caves were carried out.

The trails were for the most part cleared out by the wardens except in the case of the Baloo pass and Glacier trails, on which extra assistance was required.

Work on the Beaver River trail was resumed in September, after the flood waters had subsided, and the services of some exceptionally good men were secured, including three of the celebrated Swiss guides. The Bear Creek bridge which had been undermined at one end, was first raised and generally repaired, and then the construction of a new bridge over Beaver river was proceeded with. As the main span on this crossing was over 90 feet in length, the cantilever type of bridge was used and an excellent job made of the whole structure. All bridges in this country have of course to be able to stand enormous strains in order to bear the weight of the winter snows, but this bridge, as constructed, should be able to stand all that will be demanded of it. Its total length is 144 feet.

At the Nakimu caves a considerable amount of development work was done by the caretaker and discoverer, Mr. C. H. Deutschman. Although unable to secure the services of an efficient helper, Mr. Deutschman started in on the work single-handed, and made such progress that by the end of the season he had completed 111 feet of concrete stairway and 67 feet of concrete walk, as well as a number of smaller works, all of which will tend to make the caves more accessible to the public.

Only a few minor fires occurred during the year and these were easily suppressed and no damage to either timber or property resulted.

APPENDIX No. 4.

REPORT OF THE SUPERINTENDENT OF REVELSTOKE PARK.

E. N. RUSSELL, ACTING SUPERINTENDENT.

The appropriation allotted to Revelstoke park was materially reduced this year and was only sufficient to cover safeguarding the park from forest fires and the actual repairs and maintenance of roads and trails already in existence. It was therefore not possible to do any further work on the automobile road to the summit of the mountain. This road, the construction of which is nearly completed, is one of the main features of the park. Commencing in the city of Revelstoke, it follows the Columbia valley for a short distance northward and then abruptly begins the ascent. At no point on the road does the grade exceed 7.6 per cent, while the average is considerably lower and at every turn a wonderful panoramic view of magnificent scenery is presented until finally the summit of mount Revelstoke is reached at an elevation of nearly 7,000 feet. Here the traveller finds himself on a beautiful park-like plateau with groves of balsams, flower-carpeted meadows, mountain tarns or glacial lakes offering many varieties of scenery.

The principal difficulty in the maintenance of this road is the prevention of wash-outs caused by the thawing of the heavy snows. From the time when the snow begins to melt on the lower levels until it disappears from the summit about six weeks later, the road requires constant attention. New watercourses are formed each year which must be diverted into adequate culverts or great damage is liable to result to the road bed. As a result of the close watch kept on the road during the season, however, the cost of actual repairs this year was slight.

During the early summer, His Royal Highness, Prince Arthur of Connaught, passed through the mountains and held his train in Revelstoke for the express purpose of taking the drive up mount Revelstoke. I availed myself of the opportunity to ask him if he would be good enough to plant a post in commemoration of his visit, similar to that erected by his father when Governor General of Canada, and he was kind enough to consent. The new post was planted at station 635.

TRAILS.

The mount Revelstoke trail from Revelstoke to the summit of the mountain was repaired under the direction of the fire warden. This trail affords a much shorter route for pedestrians than the motor road and is very largely used.

FIRE PROTECTION.

Two fires occurred in the park during the year. The first was started by a settler living outside the park boundaries, who, while burning slashing, inadvertently let the fire get beyond his control with the result that it spread into the park. Some 160 acres were touched or burned over but as it was all second growth timber the damage was not great. The second fire was started by lightning on the summit but was fortunately discovered and extinguished by a party of engineers who were camped nearby before any material damage had resulted.

A new warden's cabin should be erected on the summit, also a small stable for the warden's horse. This cabin should be connected by telephone with the city of Revelstoke by an extension of our present line so that if the warden from this vantage point should observe a fire anywhere in the vicinity he would be able to summon help at once.

RECREATION.

The Revelstoke Ski Club held its annual sports in the park as usual. These were attended with great success. Jumping contests were held for the first time on the improved grounds and the big jump, which is now considered one of the finest in Canada, met with much praise.

GAME.

Game within the park is on the increase. Large numbers of several species of grouse can be observed at any time on the mountain sides, while bear, deer and goat are frequently seen.

APPENDIX No 5.

REPORT OF THE SUPERINTENDENT OF JASPER PARK.

R. S. STRONACH, ACTING SUPERINTENDENT.

Owing to the necessity of curtailing all government expenditure on account of the war, no work was undertaken in this park during the past fiscal year beyond what was absolutely essential.

FIRE AND GAME SERVICE.

The number of wardens employed in the park has been increased from 12 to 14. This is still a very small number considering the large area of the park, 4,400 square miles, and it is hoped additional men may be added to the staff during the coming year. The policy followed in engaging wardens has been to appoint returned soldiers when possible, and it was fortunately possible to secure suitable returned men for all vacancies which occurred during the past year.

FIRES.

No serious fires occurred in the park, although we had an unusually dry summer. Nineteen small fires were started but owing to the precautions taken by the wardens, assisted by the co-operation of the railway officials, no serious damage was done. The total expenditure for fire fighting incurred by the department was only \$410.89.

GAME.

The number of wild animals in the park shows a considerable increase and owing to the strict protection afforded they are becoming extremely tame. Deer are sometimes seen walking through townsites and sheep are also very tame. There is a flock of the latter which can be seen at almost any time about two miles west of Pocahontas along the railway line. Beaver are also very numerous and tame, and tourists take a great deal of interest in watching them at work.

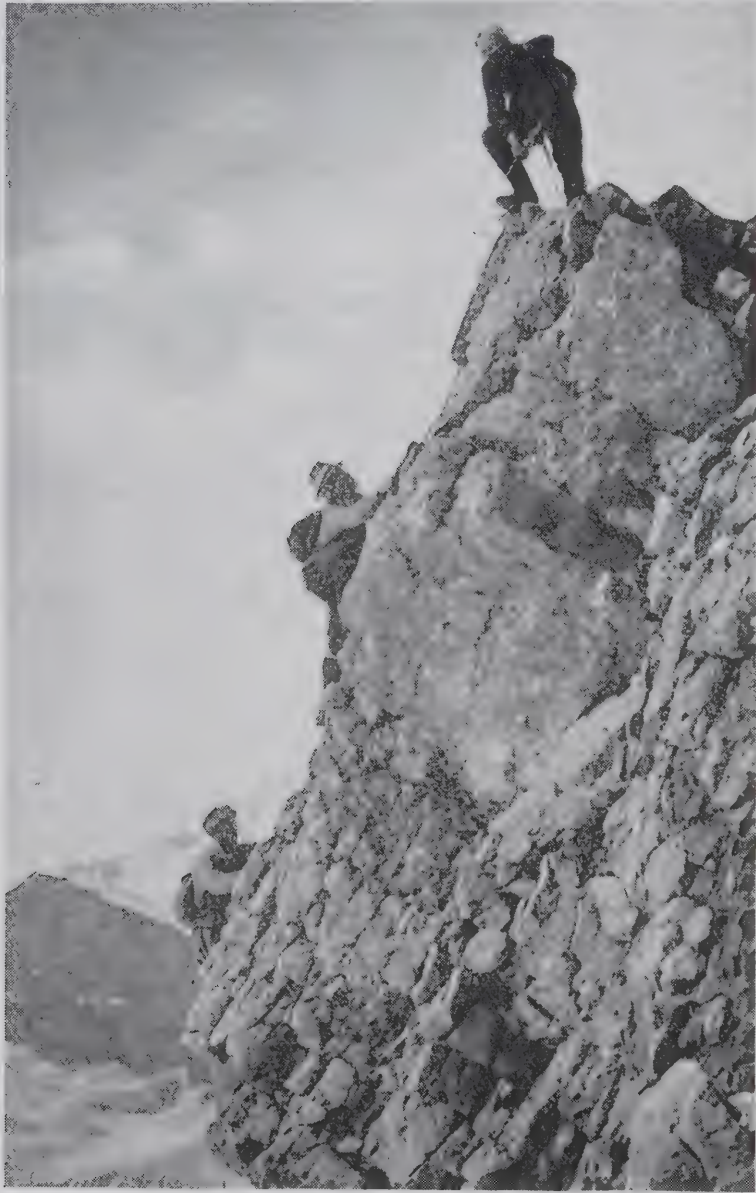


Photo by BYRON HARMON, Banff.

Climbing Mt. Resplendent, Jasper park.

Owing to the active campaign undertaken by the wardens, the number of predatory animals in the park has been considerably decreased. The large number of coyotes destroyed is particularly gratifying as they were formerly a serious menace to the deer.

FISHING.

Caledonia lake continued to prove an excellent fishing ground and sportsmen had little difficulty in securing fifteen—the number permitted to be taken in one day.

Jack lake is also famous for the size and number of its fish, but its distance from Jasper makes it less frequented. Numerous other and more accessible lakes also provide good sport.

Last August 84,000 fry were received from the hatchery at Banff and placed in three lakes, it having been found that the 34,000 fry and fingerlings with which several lakes had been stocked in November, 1917, were thriving and in excellent condition. The lakes now stocked are Pyramid, Patricia, Beau Vert, Annette, and Edith, the fry being land-locked salmon, Atlantic salmon and cut-throat trout.

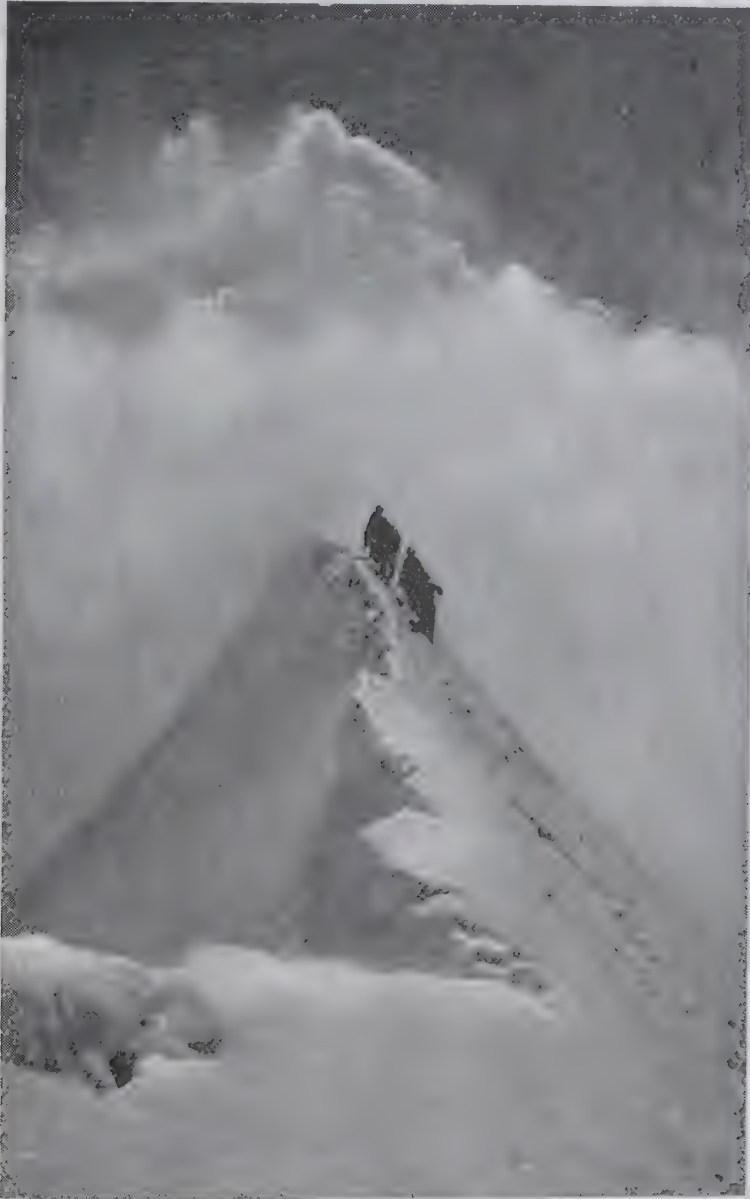


Photo by BYRON HARMON, Banff.

AMID ETERNAL SNOWS.

Summit of Mt. Resplendent (11,173'), Jasper park.

ROADS AND TRAILS.

No new roads were constructed during the year but the existing roads were kept in good condition to meet the needs of the tourist traffic.

The trail from Jasper to Caledonia lake was completed and small diversions to existing trails made. I would point out that for some time the future of this park will depend largely on trails and it is hoped considerable new development work will be possible in the near future.

ROYAL NORTHWEST MOUNTED POLICE.

The number of Royal Northwest Mounted Police stationed within the park has been increased to three, a non-commissioned officer now being permanently placed at Jasper, Brule and Pocahontas.

PUBLIC HEALTH.

The prevailing epidemic of Spanish influenza which swept the country also reached Jasper Park, but owing to the extremely healthy conditions and the precautions taken by the authorities, the number of deaths was extremely low.

MIETTE SULPHUR SPRINGS.

The Miette sulphur springs, about 12 miles from Pocahontas, can compare with any of a similar kind in Canada. Unfortunately, it has not yet been possible to develop these springs as had been hoped. Notwithstanding the fact that patients anxious to take the treatment have to live in tents and pack in all their supplies by ponies, there was an average of 25 people staying at the springs all summer and numerous cures were effected. One case worthy of mention was a man who was unable to walk when he commenced taking the treatment, but who in a couple of weeks was able to cover on foot the 12 miles of trail between the springs and Pocahontas. He stated that he had suffered from rheumatism for a number of years without being able to get any relief, but after a month's stay he was able to return home apparently entirely cured.

APPENDIX No. 6.

REPORT OF THE SUPERINTENDENT OF WATERTON LAKES PARK,
R. COOPER.

Waterton Lakes park last year had the most successful tourist season in its history. Approximately 9,000 visitors entered the park. Practically all the travel was by motor-cars, most of which came from Southern Alberta towns, and the fine weather and good condition of the provincial highways leading to the park helped to make this a record season.

WORK OF THE YEAR.

Roads.—The main automobile road entering the park from Cardston and Lethbridge was widened, graded, gravelled and surfaced for a distance of 1½ miles from Station 23. A number of improvements were also made to the remainder of the road and it is now in excellent condition.

Bridges.—A new trestle bridge was erected over Pass creek on the main road to Oil City and Flat Head, British Columbia. This bridge will be a great convenience to park visitors motoring to Wall lake. The bridge on the main road entering the park over Pass creek was repaired and piers reproped to prevent further washing and undermining.

FIRE AND GAME PROTECTION.

Big game is becoming more plentiful each year and numbers of sheep and deer are often seen in the townsite. The herd of wild elk which ranges up Castle river are increasing very rapidly; elk have been seen up Pass creek and around the lakes, and it seems probable that they will eventually be found scattered through the park, as the sheep, deer and goats now are.



Photo, W. J. OLIVER,

Pass Creek Falls, Waterton Lakes park.

There was one infringement of the park regulations with regard to the killing of deer. The guilty party was fined \$50, with costs, and the head and carcass confiscated. Other minor infringements were reported and convictions secured.

Two new warden's cabins were erected during the year, one at the international boundary, on the west shore of the lake, and the other on Pass creek. A warden's headquarters cabin is also under erection at Yarrow creek.

TELEPHONE.

The telephone line which extends from the Belly river west and north to Yarrow creek, a distance of 35 miles, connecting with the chief warden's and Waterton bridge cabins and the superintendent's office, has proved a great convenience. There is at present no outside telephone connection, but it is hoped the Provincial Government will in the near future extend the Pincher creek line to the park. This would be a great convenience in the administration of park business.

RECREATION.

Two of the chief attractions at Waterton Lakes park are boating and fishing. Last season, as usual, excellent catches of Dolly Varden and Cutthroat trout were reported. Two new passenger launches were placed on the lakes to handle the increasing passenger traffic. Mr. Hansen also operated his boat and his register shows that he carried 1,500 people to the head of the lakes during the season.

BUILDING.

Several new cottages were erected, all of a good type. A garage was also opened which will accommodate 50 cars. As practically all the suitable residential lots had been built upon, an addition to the townsite was surveyed last fall, and when this is completed it will be possible to accommodate all who wish to erect cottages with building lots.

APPENDIX No. 7.

REPORT OF THE SUPERINTENDENT OF BUFFALO PARK, A. G. SMITH.

FARMING OPERATIONS.

We began work on the land early in April and by the 20th of May we had our crop in, which consisted of 450 acres seeded to oats. In June 200 acres of land which had produced the second crop were summer-fallowed; this was gone over a couple of times with the harrows during the summer and was left in splendid condition for seeding in the spring. Owing to the frost in July we were obliged to cut 300 acres of our crop for green feed, and from the balance we threshed 1,400 bushels, which was just about equivalent to the amount of seed used.

HAYING.

The dry season was favourable for haying operations on the Ribstone meadow, and we succeeded in putting up about 500 tons. The quality of this hay was much better than the previous year, as there was less old bottom in it. There were also 475 tons of upland hay put up out on the summer range; part of this was for the horses at the north end and animals in the home paddock enclosure, and the balance, about 300 tons, will be baled to be shipped to other Dominion Parks.

A portable engine and hay-baler were purchased for baling hay, but did not reach us until mid-winter. We had, however, succeeded in baling and shipping 200 tons to the other parks before the end of the year.

Settlers living in the vicinity of the park, who were short of feed, were greatly assisted by the granting of hay permits. In all 32 permits were issued, covering the cutting of 800 tons on the reserve.

FIRE-GUARDING.

The fire-guards around the outside of the park, as well as the cross-guards, were either ploughed or disked, the work being done with our own teams.

We had one fire on the reserve which nearly proved disastrous, but fortunately we succeeded, after a couple of days' fighting, in putting it out. This fire came from the



YAK.

Experiments in cross-breeding the yak with buffalo are now being conducted at Buffalo Park.

east; it burned over those sections east of the Ribstone creek and we were driven back in our fight until we reached the green timber bordering the creek. Had it crossed the creek all the hay on the meadows would have been lost, and perhaps a great deal more, as it was travelling in the direction of the farm buildings.

There were numerous other fires on every side of the park, but I am glad to say we suffered no loss from any of them.

FENCING.

Building and repairing fences was a large item of expenditure at this park during the year. With the exception of a few miles on the south boundary, we completely circled the park repairing the main fence, putting in a large number of new posts. A new fence, completely surrounding the Ribstone meadow, was erected; also a new fence surrounding the pasture and buildings at Rocky Ford. For subdivision purposes, some three miles of new fence were erected in the Cattalo enclosure. The hauling of all material required for the above fencing was quite an item, and it was all done with our own teams.

TIMBER PERMITS.

Twenty-nine dry wood permits were issued to settlers, allowing them each to take 25 cords of wood for their own use. This was especially appreciated this year, owing to the high cost of fuel.

WILD ANIMALS.

Our herd of wild animals has increased wonderfully during the year. Six hundred and sixty-five buffalo calves have arrived since the last report was submitted, and the decrease in buffalo was 28. Of this number 17 died and 11 were shot on account of being cripples.

The elk, moose, and deer also show a fair increase, and, at this date, the animals in Buffalo Park, are as follows: Buffalo 3,561, elk 102, mule deer (estimated) 420, moose 22, antelope 2, cattalo 18, domestic cattle 11, total 4,136.



Photo by WAINWRIGHT STUDIO.

CATTALO ($\frac{5}{15}$ BUFFALO BULL).

Result of cross-breeding buffalo with domestic cattle.

The domestic cattle mentioned above have been brought in recently, as part of the scheme which is now being carried on by the Department of Agriculture for raising cattalo.

Owing to the dry season, most of the range in the big park was cleaned off, and it was necessary to put about 2,500 buffalo in winter quarters last fall, to be fed during the winter months.

COYOTES.

A constant hunt with two packs of dogs has been kept up during the year, and over 80 of these animals were destroyed.

VISITORS.

Judging by the number of visitors we had during the year Buffalo Park is becoming more widely known. According to the records kept by the caretaker at the Wainwright end, 6,322 visitors entered the park at this point. The records kept at the Farm and Hardisty gate also show a large increase in the number of visitors; in all, over 7,000 people paid the animals a visit, which is a considerable increase over other years, and all expressed delight with their visit to Buffalo Park.

APPENDIX No. 8.

REPORT OF THE SUPERINTENDENT OF ELK ISLAND PARK,
ARCHIBALD COXFORD.

During the past year, on account of the continuance of the war, only necessary repair and maintenance work was undertaken.

FIREGUARD.

The fireguards were ploughed in the month of July and disked later in the fall.

FENCING.

The main fence was in good condition and only required a few new posts and braces. Through some of the muskegs, however, the posts are very rotten and should be replaced this season. Owing to the dry weather of the past two seasons the ground is now in excellent condition for undertaking this work.

HAYING.

The weather was very good for haying this season but the growth of hay was light owing to two dry seasons. However, a sufficient quantity was put up for the winter's feed.

ROADS.

A few repairs were made to the road through the south corrals making it passable for cars. This was much appreciated by tourists who desired to see the animals.

ANIMALS.

The buffalo are in very good condition but we have to feed them since the middle of January. The winter has been very mild, but owing to the lack of rain during the summer the grazing had become very scarce and insufficient for the buffalo and elk. One old buffalo bull had to be shot as it was getting poor. By shooting it a fine head and robe were saved.

The number of animals in the park at present are:—

Buffalo..	182	Moose..	57
Elk..	106	Deer..	111

CAMPERS AND VISITORS.

This has been a record season for campers and visitors. Many requests were made by local people for sites for small summer cottages and I think this matter should be given some consideration as these people would tend to bring the park before public notice.

During the season we have had a total of 3,404 visitors.

APPENDIX No. 9.

REPORT OF THE HONORARY SUPERINTENDENT OF FORT ANNE PARK, ANNAPOLIS ROYAL, L. M. FORTIER.

Only such work has been undertaken during the past year as was essential to the upkeep of our old fort and its surroundings in a fairly presentable condition, all larger schemes being deferred for the time being.

The old sally port and its approaches, which were showing the ravages of time, received the necessary attention, as did also the stonework approaches to the two powder magazines, and the interior of one of them (that commonly known as the "black hole"), which was rather seriously affected by the last winter's frost, is now being put in thorough repair.

A most interesting addition to the park during the year has been the Vaughan memorial sundial, a personal gift, from Colonel Richard Cutts Shannon, of Brockport, N.Y., in memory of an ancestor.

The sundial is constructed of New Hampshire granite and bronze, and stands in an oval cobblestone area outside the ramparts of Fort Anne.

It bears upon its shaft the following inscription: "Erected 1918 in memory of George Vaughan, who served as a volunteer under General Nicholson in the expedition for the reduction of Port Royal in the ninth year of the reign of Queen Anne, A.D. 1710, and was afterwards (1715-17) Lieutenant-Governor of his native colony of New Hampshire."

The ceremony of unveiling was performed by the Lieutenant-Governor of Nova Scotia last Dominion Day, and attracted a very large number of spectators.

The Museum of Fort Anne now fills two rooms in the old officers' quarters building (now the administration building of the park) and contains an ever-growing number of objects of interest relating to the past history of Port Royal and Annapolis.

We have had not less than two thousand visitors during the year.

APPENDIX No. 10.

ST. LAWRENCE ISLANDS PARKS.

These parks, being situated among the Thousand Islands, in the centre of thickly settled communities, where all available lands have been taken up, render a great service to the public. Although they only afford accommodation to transient visitors or camping parties, they are visited by thousands of people every summer.

They afford a good illustration of the desirability of making public reservations among districts of exceptional scenic beauty. At the present time practically all the land along the Thousand Islands is privately owned, and if it were not for the Government Parks there would be no place where the public would have the right to land, to camp, or picnic, or fish. There is no doubt but that this will eventually be the case with many others of our beautiful scenic districts, and it shows how necessary it is that reservations should be made now to ensure that the public shall have access to them in the future.

The St. Lawrence parks are becoming more popular every year, and amply repay the small amount of expenditure necessary to make them available to the public.

Only such expenditure was made during the year as was necessary to maintain the present equipment and make the islands available to the public.

APPENDIX No. 11.

AGREEMENT WITH BRITISH COLUMBIA.

Memorandum of Agreement made and entered into this twelfth day of March, in the year one thousand nine hundred and nineteen;

Between

His Majesty the King, in right of His Dominion of Canada, hereinafter referred to as the "Dominion Government,"

Of the one part,

And

His Majesty the King, in right of His province of British Columbia, hereinafter referred to as the "said Province,"

Of the other part.

Whereas the said Province has commenced the construction of a portion of the road known as the Banff-Windermere road, between Windermere, British Columbia, and Banff, Alberta, and of the which the section from the junction of the said road with the Golden-Windermere road at Sinclair Creek in the district of East Kootenay, to the eastern boundary of the said province, is incomplete;

And whereas it has been agreed between the Dominion Government and the said Province that the said road shall be completed by the Dominion Government, and that in consideration thereof the said Province among other things will grant and convey in fee simple to the Dominion Government the said road in so far as it lies in the province of British Columbia and a strip of land ten (10) miles in width lying five (5) miles on each side of the said road and immediately adjoining same and shall further undertake and agree as hereinafter provided.

Witnesseth that the parties hereto mutually agree as follows:—

1. The Dominion Government shall within four (4) years from the conclusion of peace in the present war complete the construction of the portion of the Banff-Windermere road extending from its intersection with the Golden-Windermere road at Sinclair Creek, in the district of East Kootenay, to the eastern boundary of the province, provided that the Dominion shall have the right to alter the location of the road as at present laid out or projected wherever the Dominion considers alterations advisable.

2. The Dominion Government agrees that it will hereafter maintain the said road as a public highway during the months of May to October, both inclusive, in each year;

3. The said province shall grant to the Dominion Government all that certain strip of land sixty-six (66) feet in width, known as the Banff-Windermere road, as now located or as it may be located through revisions considered advisable by the Dominion Government, and which extends from its intersection with the Golden-Windermere road at Sinclair creek, in the district of East Kootenay, to the eastern boundary of the province. Where the Government of British Columbia has not title to the lands for the road, sixty-six (66) feet in width, it shall acquire same at its expense and transfer same to the Dominion.

4. The said province will grant to the Dominion Government a strip of land along the said Banff-Windermere road as laid out and completed to an approximate width of five (5) miles on each side thereof. Provided always that as far as possible the crests of the mountains shall constitute the outside boundaries of the said areas and provided further that all minerals, precious and base, and all coal and petroleum lying in and

under the land so to be conveyed shall be excepted by the province from the said grant. And provided further that grants to such parts of the lands referred to in this paragraph as are now covered by timber license or lease shall only issue to the Dominion Government when such license or lease has expired, been cancelled, or the lessee or licensee has completed cutting.

The province further excepts from such grant to the extent of any interest other than that of the Crown in the same all lands held under Crown grant, pre-emption record, agreement for sale, lease, license, or other alienation by the Crown, or in which any person has a vested interest, provided, however, that upon the cancellation, abandonment or expiration of any Crown grant, pre-emption record, agreement for sale, lease, license, vested interest or other alienation by the Crown of such lands, such lands shall thereupon automatically be vested in the Dominion Government, and the province will by all proper means available endeavour to arrange that all lands within the aforesaid ten (10) mile strip alienated or in regard to which any one had any vested interests prior to the twenty-seventh (27th) day of May, 1916, shall be secured by the province and granted to the Dominion Government, and to complete arrangements with any person holding any such lands for the relinquishment of any rights so held, and shall promptly take whatever steps are necessary for the purpose and for the end aforesaid.

In every case in which the said province exercises the powers referred to in this section the said province shall in consideration of such relinquishment or for the purpose of compensating any person for all loss or damage sustained by reason of such entry and taking possession, cause a Crown grant to be made to such person of other suitable land selected from the unalienated Crown lands in the province and the Dominion Government agree to compensate all persons who have relinquished their rights to any part of the said land and all persons who have been deprived of possession of their said lands or any part thereof outside the limits of the aforesaid way sixty-six (66) feet in width for all improvements made upon the said land by such persons who have either relinquished their rights thereto or who have been deprived of their possession if the amount of compensation to be paid be approved by the Dominion Government.

5. The grants undertaken by the last two preceding clauses shall be made immediately upon execution of this agreement and shall operate to convey the lands aforesaid as the same will be defined by the final location of the road, subject to the provisions of this agreement.

6. All lands in regard to which rights are extinguished under paragraph four (4) hereof, shall thereupon automatically be vested in the Dominion Government.

7. The province shall delegate to the Dominion Government all authority it now has or may hereafter have in regard to the utilization of timber or of any other materials from privately-owned lands or from lands now covered by any timber licenses or leases, such timber to be utilized by the Dominion Government for the purpose of constructing or maintenance of said road.

8. Mineral claims, placer claims and mining rights in the said ten (10) mile strip may be acquired only on such terms and conditions and under such regulations as the Lieutenant-Governor in Council may from time to time determine, subject to the provisions hereinafter contained.

Mineral and placer claims in the said ten (10) mile strip shall be administered by the province, provided, however, that:—

(1) No claim shall be recorded unless the Minister of the Interior certify in writing to the Minister of Mines for the province that he is satisfied that the recording and operation of such mineral or placer claim will not interfere with the scenic beauty or other features in the said area.

(2) The owner of any mineral claim, mine or placer ground shall be entitled to the use of only such portion of the surface of such mineral claim, mine or placer ground as in the opinion of the Minister of the Interior may be necessary for the

effective and economical operation of the said mine or placer ground, and such area shall be leased to the owner of such mineral claim, mine or placer ground on such terms and conditions as the Minister of the Interior may specify.

(3) The possession of a free miner's certificate shall not entitle the owner thereof at any time to carry unsealed firearms within the areas in question or to take, or kill, or have in his possession any wild bird or animal therein.

(4) No person operating and working a mineral claim, mine or placer claim, shall without special authority from the Minister of the Interior be entitled to cut down any green timber standing upon the area covered by his mineral claim, mine, or placer claim.

9. The holders of existing timber licenses or leases in the areas mentioned in paragraph four (4) hereof shall be entitled to cut and carry away timber under the terms of their special timber licenses or leases and shall be subject always to the provisions of the Forest Act of the Statutes of British Columbia.

10. All water rights in the area mentioned in paragraph four (4) shall be administered by the province under the laws of the province provided, however, that no record shall be hereafter granted by the province without the consent of the Minister of the Interior, or save upon such conditions as the Minister of the Interior may specify.

PART II.

1. With respect to the areas described in paragraph three (3) and four (4) of this agreement, and with respect to all Dominion Parks now existing or which may hereafter be established within the province as aforesaid, and with respect to all persons or property situate or being within these areas or parks, including all alienated lands within the limits or boundaries of the ten (10) mile strip and the parks aforesaid, the province undertakes that its legislation and regulations thereunder shall at all times hereafter be conformable to and correspond with the legislation and regulations of the Dominion governing Dominion Parks generally, or the particular area or parks with which this agreement is concerned specially, so that there may at all times be uniformity; and that the province will not hereafter enact or maintain in force with respect to any of the parks, areas, property or persons aforesaid, any legislation or regulations in conflict with those of the Dominion. Provided that the province shall continue to exercise its powers for the areas and parks aforesaid with regard to licenses for motor vehicles and with regard to the liquor traffic; but that,—

(a) Holders of provincial motor licenses other than bona fide residents of the areas or parks aforesaid, shall nevertheless be subject to the payment of the Dominion Parks motor license fees as the same may from time to time be regulated or imposed by authority of the Dominion, and

(b) No permit to deal in liquor shall be granted without the consent of the Dominion Government.

2. As to license fees for motor vehicles owned or operated by bona fide residents of the areas aforesaid imposed or authorized by provincial legislation, the Dominion Government shall use its best endeavours to collect the same and subject to an annual deduction therefrom of the sum of \$5 in respect of each license fee, shall transmit the amount of such collections annually to the province.

3. The province undertakes to enact or sanction and carry into effect all such further authority legislative or executive as may be necessary for the purpose of carrying out fully and completely the terms of this agreement, according to their true object and intent.

In Witness Whereof, W. W. Cory, Deputy Minister of the Interior, has hereunto set his hand, and affixed the seal of the Department, and the Honourable James Horace

King, Minister of Public Works of the Province of British Columbia has hereunto set his hand and affixed the seal of the Department of Public Works for the said province. Signed, sealed and delivered by the Deputy Minister of the Interior,

(Sgd.) W. W. CORY.

In the presence of

(Sgd.) J. E. GIBSON.

And by the Honourable James Horace King, Minister of Public Works of the Province of British Columbia,

(Sgd.) J. H. KING.

In the presence of

(Sgd.) J. E. MYERS.

Private Secretary,

Minister Public Works, Victoria, B.C.

APPENDIX No. 12.

AGREEMENT WITH ALBERTA.

MEMORANDUM OF AGREEMENT between the Government of the Province of Alberta and the Government of the Dominion of Canada *re* Dominion Parks in Alberta.

LAW AND ORDER.

1. The Dominion will assume the responsibility for the maintenance of law and order in the parks, providing mounted or other police for the purpose. These police will enforce any provincial laws that are ordinarily enforced by a police force.

If any doubt should arise as to the authority of the police in the parks to act with respect to the enforcement of any of the provincial laws above referred to, the province will take whatever steps are necessary to vest them with such authority.

MOTOR LICENSES.

2. In the case of motor-cars owned by residents of a park, the owner must take out a provincial license for motors and pay therefor the fee prescribed by the province. Such license will be issued by the superintendent of the park concerned, who will be furnished with number plates and the necessary forms by the province. Of the license fee paid the Dominion shall retain five dollars, the ordinary fee for private motor-cars in the parks, and the balance of the fee shall be transmitted to the Provincial Government. The Dominion shall provide for a suitable marking on the license plates to distinguish them from the plates issued outside the parks.

In regard to motor-cycles, one-half the fee paid shall be retained by the Dominion and one-half shall be transmitted to the province.

In regard to dealers' licenses, one-half the fee shall be retained by the Dominion and one-half shall be transmitted to the province.

The province agrees that the superintendent of a park may issue free of all fees and charges, licenses for any and all motor vehicles owned by the Dominion Parks' service.

In regard to all licenses dealt with above a license issued after October 1 (good until December 31) shall be issued for half the regular fee, the division of such fee between the province and the Dominion to be made as follows: The province to receive one-half the amount it would have received had the license been a yearly one and the Dominion to receive one-half the fee it would have received had the fee been a yearly one.

Chauffeurs operating in the park shall operate under a parks' license and the entire fee therefor shall be retained by the Dominion.

All cars while operated in a park shall operate under parks' regulations.

THEATRE TICKET TAX.

3. The province will continue to collect theatre ticket tax in amusement places in the parks.

LICENSES GENERALLY.

4. The province will not collect license fees with respect to guides, pool rooms, bowling alleys, amusement places, theatres, motion-picture houses, boats' livery, restaurant, or any other matters which by their nature are closely related to the tourist, but will leave the licensing and control of all such subjects exclusively to the Dominion.

EDUCATION.

5. Educational matters will continue under the exclusive jurisdiction of the province.

In any case where legal proceedings are carried out against a leaseholder for the collection of school taxes and such action involves the transfer of the rights of the leaseholder the Dominion will as a matter of course issue departmental consent to the transfer.

The Dominion will insert a clause in all ordinary parks' leases hereafter issued for lands, making such leases subject to the payment of school taxes.

The Dominion will give a free lease of available parks' lands for school sites so long as the property is used for school purposes.

The Dominion will put a clause in any coal mining lease (surface or under rights) issued hereafter in regard to any parks lands, forest reserves lands, or Dominion lands, making the lessees responsible for school taxes imposed by the province and making the lease subject to the payment of such taxes.

6. The Dominion will insert in any coal mining leases hereafter issued with respect to parks, forest reserves or Dominion lands, a clause requiring the lessee when a school district is organized in the vicinity of the mine to erect and maintain during the currency of the lease a schoolhouse satisfactory to the Minister of Education for the province on a site provided by the mine owner satisfactory to said Minister.

(Sgd.) CHAS. STEWART,

(Sgd.) J. B. HARKIN,

Premier of Alberta.

Witness as to signature of Premier of Alberta.

(Sgd.) W. W. CORY,

(Sgd.) H. CHANDLER,

Deputy Minister of Interior.

Witness as to signature of Deputy Minister of Interior.

Executed at Ottawa, November 23, 1918.

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National Parks Branch

Government
Publication

DEPARTMENT OF THE INTERIOR, CANADA
Sir JAMES LOUGHEED, Minister; W. W. CORY, Deputy Minister

DOMINION PARKS BRANCH
J. B. HARKIN, Commissioner

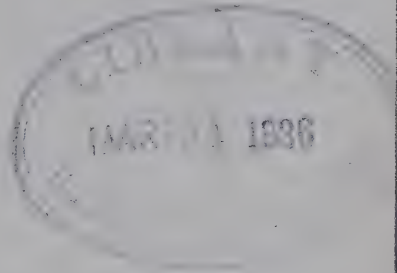
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Annual

REPORT OF THE
COMMISSIONER OF
DOMINION PARKS

FOR THE YEAR ENDING
MARCH 31, 1920

1919/20



OTTAWA
THOMAS MULVEY
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1921



Denizens of the Heights Rocky Mountain Goat

Photo by H. H. Henshaw

DEPARTMENT OF THE INTERIOR, CANADA

Sir JAMES LOUGHEED, Minister; W. W. CORY, Deputy Minister

DOMINION PARKS BRANCH

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REPORT OF THE COMMISSIONER OF DOMINION PARKS

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REPORT OF THE COMMISSIONER OF DOMINION PARKS FOR THE FISCAL YEAR ENDING MARCH 31, 1920

The reports of the field officers of the Dominion Parks Service appended hereto recite the particulars of the work carried on during the fiscal year ending March 31, 1920. In all the parks many activities which had necessarily been suspended during the war were renewed and while labour conditions were nowhere normal, considerable progress was made in many lines of work.

TOURIST TRAVEL.

Tourist travel to all the parks showed a marked increase during the year, the outstanding feature being the revival of travel by rail. As was anticipated the cessation of the war with all its attendant anxieties produced in many the desire for change and recreation and, possibly because of the part she had played in the conflict, hundreds of thousands turned their eyes towards Canada. In consequence the parks had the best season since 1915—the year of the Pacific Coast Expositions. While the total number of visitors did not reach the figures of that or some preceding years, this was due to the fact that large numbers of visitors, instead of remaining for only a few days in the parks, stayed for weeks at a time and many for the entire season. This necessarily limited the available accommodation. During July and August there was scarcely a day in which visitors who wanted to stay over but who had not made reservations in advance, were not compelled to go on to other points. The great hotels at Banff and Lake Louise were crowded practically up to the end of September and the smaller hotels were almost equally taxed. Every cottage available in Banff was occupied and several lodging-houses added tents to their accommodation. Similar conditions prevailed at Emerald Lake, Yoho Camp, Glacier and Jasper.

I think we may look forward to this large volume of travel being maintained and even increased for several years. Limited accommodation and high prices in Europe will undoubtedly restrict travel abroad for some time and in the meantime the attractions of the Canadian Rockies are becoming more widely and favourably known. The most pressing problem would appear to be one of increased accommodation. This is particularly urgent in Yoho and Jasper parks. Both of these parks possess scenery worthy of attracting as heavy a traffic as Banff but owing to the limited accommodation they receive only a small percentage of the travel which they otherwise might. It is greatly to be hoped that first class hotels will be built at both these places in the near future.

While the number of visitors by motor to Rocky Mountains park did not show any marked increase over the large traffic of the previous year, this was no doubt due to the unusually dry season which rendered motoring unpleasant on account of the dust and to the fact that the road to Lake Louise is not yet open. Waterton Lakes park, however, which can be reached only by motor, had the biggest year in its history and Buffalo and Elk Island parks, which are attractive objectives for prairie motorists, also showed large increases.

There are many signs that Canadians as a whole are realizing more clearly the immense potential values of tourist traffic. The campaign inaugurated by the Canadian Manufacturers' Association, the organized efforts being put forth by the provinces of

British Columbia and New Brunswick and the Victoria Island Association are important steps in this connection and will undoubtedly help to stimulate travel and thus increase the prosperity of the country. As I have pointed out before, the benefits from tourist traffic are not confined to any one place. Once the stream of travel is set in motion it enriches many shores. Thousands of tourists, for instance, who are attracted to Canada by the fame of the parks, visit Calgary, Vancouver and Victoria en route, and vice versa, many who visit these cities learn of the parks and go on to see them. Figures compiled by the Canadian Pacific Railway passenger department in Winnipeg and published in the *Winnipeg Tribune* of February 9, 1917, showed that 42 per cent of the total number of visitors to the parks in that year, or 43,470, came to Winnipeg and spent there on an average \$10 apiece or \$434,700 in all. Other cities would benefit proportionately.

TOURIST BUREAU.

In previous reports it has been stated that the magnitude of the revenues involved in tourist travel warrant the creation of a tourist bureau on the part of the Federal Government. In this connection it is interesting to note that the Secretary of the Interior at Washington in his latest report says: "I cannot too strongly recommend the establishment of a travel division in the National Park service. It is vitally important to the nation and our bureau is certainly the place for it because no other agency of the Government is so interested in or closely connected with the touring public as is this service." He goes on to point out the advantages of bringing the tourist industry under Government supervision and says: "A division of touring could co-operate closely with the resorts of the nation, whether in a national park or not, and by issuing promotive literature under the stamp of the approval of the department and the Service could more effectively stimulate travel in the United States than any other agency because its data would not be selfish or exaggerated and would have the confidence of everybody using it."

The Office of Touring, the special bureau organized by the French Government for the development of tourist traffic to France, has developed a very active policy. At the last sitting of the Chamber of Deputies, a bill asking for a vote of 30,000,000 francs was brought down, the money to be applied to the construction of tourist hotels and the purchase of 220 sight-seeing automobiles. France has realized that the development of a large tourist revenue will be one of the easiest means of defraying part of her national debt. She hopes, it is said, to attract not less than a million tourists next year and their expenditure will undoubtedly do much to restore prosperity to the devastated regions.

It is well known that tourist travel follows the line of greatest stimulation. No matter how many attractions a country possesses a large tourist traffic will not develop unless some effort is made to attract it, but as I have pointed out before there is no industry in which a comparatively small investment will bring such enormous returns. Canada possesses undoubtedly, as our orators often declare, a "wealth of natural scenery," but this wealth is at present only potential and whether we draw large revenues from it or not depends entirely upon a policy of development. It seems probable that the time may soon come when the tourist industry will not only be organized but standardized. This has already been done to a certain extent on the continent where the traveller is practically assured of finding certain standards of comfort, cleanliness and refinement wherever he goes. In this country, however, there is still much to be done in the way of establishing standards.

There are several reasons why the development of an organized policy respecting tourist traffic should be of interest to Canada to-day. In the first place, she possesses an unfavourable balance of trade, and, as I have pointed out in previous reports, one of the best methods of offsetting an unfavourable trade balance is by bringing foreign

money into the country through tourist traffic. She possesses, moreover, on the one hand an immense potential wealth of natural scenery—she has an ideal summer climate; she has over 3,000 miles of salt-water beach; she has her great inland mountain and lake regions; her immense Rocky Mountain area and her Pacific coast, all of them capable of attracting traffic to an almost unlimited degree. She has the raw material, but her industry is not developed. On the other hand, she has a winter climate which causes large numbers of her own people to seek more southern countries for several weeks each year. This loss is inevitable, as is the loss caused by the expenditure of Canadians abroad at other seasons. The organized efforts made by other countries to attract tourist travel tend increasingly to augment both these sources of loss. She can only counteract it by developing her own resources. Undoubtedly the conditions in Canada for such development are right, but the industry needs fostering. As an example of what may be done, take the record of the city of Los Angeles. In 1892 the population was approximately 60,000. It is to-day actually 575,000, and its growth has been almost entirely caused by tourist traffic. Tourist traffic to Canada is capable of a similar development, and as I have said in previous reports, I believe that the best results can be obtained by the creation of a Federal Tourist Bureau working in co-operation with provincial governments, municipalities, motor associations, etc., as well as with the railways and large transportation interests.

BANFF GOLF LINKS.

Early in the year the services were secured of Mr. Donald J. Ross, who is considered one of the best golf course experts in America, to advise regarding the best plan to be followed in enlarging the Government golf course at Banff from a nine to an eighteen hole course. Complete plans of the layout, showing the position and details of the traps, bunkers, tees, etc., were received in September, and an immediate start was made on the work of enlarging the course. While the work is not yet completed, considerable progress has been made. The course, when finished, will be one of the finest on the American continent. In order to provide the necessary water supply for the links a 4-inch water main was laid early in the year to connect the 6-inch main at the Spray river bridge with the existing distributing main at the golf course.

NEW BOW RIVER BRIDGE.

During the year plans were prepared for a new bridge over the Bow river at Banff. The old steel structure which is no longer adapted to carry the traffic is to be replaced by a concrete bridge of artistic design which will add much to the general appearance of the town. It is expected that construction operations will be commenced during the coming year.

CASTLE-LAKE LOUISE HIGHWAY.

Tenders were called and a contract awarded for the final eleven miles of the Castle-Lake Louise highway and the construction of necessary bridges. Clearing and grubbing operations were carried on over the entire contract, but owing to the great difficulty experienced in getting and keeping labour, certain sections were not fully completed when the early fall put an end to operations. The same conditions interfered with progress work on the Mount Revelstoke motor road and the Mount Edith Cavell highway. On the latter road tenders were called and the contract awarded for the construction of the section from Station 308x00 to Station 864x00. Clearing operations were carried on to Station 630, and grubbing to Station 493. Partial grading operations were undertaken on miles 7, 8, 9 and 10 of the contract. Most

of the grading work done was on mile 9, where the steep side-hill is travelled by means of a series of switchbacks. Owing to the early winter the contractor suspended operations on October 31 without completing all the work covered by the contract.

ATHABASKA RIVER BRIDGE.

Plans were prepared for a new steel bridge over the Athabaska river near Jasper. Concrete abutments for the bridge were designed and construction started during the winter months. Part of the rock cut forming the approach to the bridge site was also removed during the winter.

BANFF-WINDERMERE HIGHWAY.

Under the terms of the agreement entered into between the Government of the Dominion of Canada and of the province of British Columbia, the Dominion agreed to complete the unfinished portion of the Banff-Windermere highway within four years from the conclusion of peace in the Great War in return for the province transferring to the Dominion a strip of land within the province of British Columbia extending five miles on each side of the said highway, and containing an area of approximately 590 square miles. As a considerable portion of the highway constructed by the provincial government had been destroyed by high water, tenders were called by this branch for the reconstruction of the portion of the Sinclair division of the above highway from Station 106 to Station 282, and a contract for the work was awarded. Work on this contract is still in progress, and it is expected this section will be completed during the coming summer. Repair work was also undertaken by the department on portions of the old roadbed above and below the contract work, and log jams which had formed in Sinclair creek and were a menace to the roadway were removed. On the northern or Vermilion end of the road some necessary maintenance work was carried out in order to prevent further damage to the constructed portion of this section of the highway. With a view to future construction work, surveys were undertaken northerly from Kootenay river crossing to the present graded portion of the Vermilion division of the highway. Twenty-eight miles of highway comprising the unconstructed Simpson and Vermilion divisions were located and are now ready for construction operations.

The completion of this road will undoubtedly mean much to the future of Rocky Mountains park. It opens up a loop route through the Canadian Rockies which will contain more scenery to the square mile than probably any other motor road on the continent. The eastern end of the road is already connected via Calgary and Macleod with the road to the United States Glacier park and thence with the National Park-to-Park highway. The western end leads via Cranbrook and Bonner's Ferry to Spokane, where it connects with the Sunset and Pacific Coast highways by direct route to California. What this will mean to the Rocky Mountains park it is difficult to estimate. The through travel on the Columbia river highway is said to be about 500 cars per day. At Crown Point, according to Herbert Nurn, State Highway Engineer for Oregon, the number of machines one way has reached 2,500 in one day. C. A. Collins, Field Secretary of the Evergreen National Highway Association, at the annual meeting of the trustees in Tacoma last summer, presented some interesting figures showing what such motor traffic had meant to California. According to the *Victoria Times* of June 21, 1919, he said: "Four thousand two hundred and forty cars were brought into California in one year over a single road! Allow an average of four passengers to the car, an average daily expenditure per person of five dollars for accommodation and entertainment, figure that these people stayed in California from one to three months, and the result will show why California gives so much attention to road signs, auto clubs and publicity work for tourists."

The Canadian parks can confidently look forward to a steadily increasing volume of motor travel. The director of the United States park service in his report for 1919 comments upon the astonishing increase in the number of cars visiting the United States national parks. In 1918 the number of private cars totalled 53,966. In 1919 there were 97,721 cars, or an increase of nearly 80 per cent. He goes on to say: "The unprecedented travel of the season just closed demonstrated to cities and towns far distant from the national parks that these great playgrounds were the most powerful magnets for motoring tourists that the western country possessed." That the Canadian parks are not inferior in attractions to the United States parks was evidenced by an incident which occurred last summer. A party under the auspices of the *Brooklyn Eagle* made a park-to-park tour by train through several of the United States parks and included the Canadian Rocky Mountains park in its itinerary. At the conclusion of the tour a vote was taken as to the respective merits of the various parks and hotels which they had visited. Here is the result of the vote:—

<i>Most popular park.</i>		<i>Most popular hotel.</i>	
	Vote.		Vote.
Canadian Rockies (Banff, Lake Louise).	24	Banff Springs..	21
Mount Rainier..	19	Glacier Park..	17
Glacier..	17	Canyon (Yellowstone Park)..	17
Yellowstone..	9	Chateau Lake Louise..	10
Rocky Mountains..	8	Antlers (Colorado Springs)..	9
All National Parks..	3	Old Faithful Inn..	5
Canadian and Glacier..	2	Metropole (Denver)..	2
Yellowstone and Glacier..	1	Edgewater Beach (Chicago)..	1
Yellowstone and Rainier..	1	Thermopolis (Carter Sanitarium)..	1
Rainier and Glacier..	1	Davenport (Spokane)..	1
Rainier and Canadian..	1	Many Glacier..	1
		"Pullman Train"..	2

As soon as the Vermilion-Sinclair road is completed the Canadian parks will automatically become part of the United States park-to-park system of highways forming a link in what will be an international park-to-park route unequalled in the world. There is I believe no room for jealousy between the two park systems. The aims of both are identical and they cannot help rendering an international service to each other. Everything that is done by the United States service to make its parks more attractive will help to swell the tide of travel which will eventually touch the Canadian parks and vice versa every improvement in the Canadian parks will have a similar effect where the United States parks are concerned.

FOREST PROTECTION.

Owing to the very dry season much anxiety was felt in the parks on account of the danger from fire. A considerable number of fires broke out but owing to the vigilance of the warden service and to the portable fire engines with which all the parks are now equipped, the damage was in almost all cases confined to a small area. One thousand three hundred and ninety-six miles of trails were patrolled by the wardens during the year. The forest protective system now includes:—

SCENIC PARKS IN ROCKIES.

Wardens..	46
Warden's cabins..	66
Miles forest telephone lines..	256.25
Phones..	66
Portable fire units..	25
Hose.. . . . .feet.	36,800
Pyrene and chemical fire extinguishers..	100
Speeders..	14
Gas masks..	82

EXPERIMENTAL WORK.

A good deal of investigation work was done with regard to the development of further modern equipment for forest protection. The use of gas in the Great War suggested its possibilities as an extinguisher of forest fires. There are several well known gas producing chemicals in liquid form but the problem of transportation in the mountains made it desirable to discover a material in the form of a powder. Experiments were made with tetra-chloride and several other chemicals but it was found that in the open air the resulting gases became diluted so rapidly that their effectiveness was lost.

The branch has developed a chemical mixture of its own known as "Pyrox" in liquid form, which appears to be an excellent fire quencher and possesses great fire-resisting properties as well. The liquid can be readily and cheaply manufactured and the experimental tests which have been made showed it to be most satisfactory for the purpose. It is believed that this liquid can be reduced to powder form and experiments will shortly be made in this connection. The use of chemicals to destroy vegetation along railway rights of way, fireguards, etc., was also investigated and experiments were made with two different liquids—light oil and acid sludge. Both of these it has been shown will successfully destroy vegetation for one year but it is hoped that they will prove effective for two or three years in succession. This would materially lessen the present labour and expense entailed in the ploughing of fireguards particularly at Buffalo and Elk Island parks and would be an additional protection along railway rights of way.

WILD LIFE IN THE PARKS.

The continued increase of practically all forms of wild life is very gratifying. It affords incontrovertible evidence of the value of sanctuary protection. The superintendent of Jasper park reports that at the close of last season there were estimated to be 5,000 bighorn now within the boundaries of that park. A few years ago their numbers had been reduced to a minimum. As was anticipated there is already a natural overflow into the areas contiguous to park boundaries. Reports received from sportsmen show that there were last fall approximately 2,000 bighorn between the Forks of the Macleod and the Southesk rivers. A British Columbia authority recently estimated that each head of big game was worth \$1,000 on account of the money brought into the province through the wealthy sportsmen it attracted. On this basis the increase from Jasper park into the Southesk country alone has added \$2,000,000 to the value of the natural resources of Alberta. This is only one district. Similar reports are received from practically all hunting areas.

A notable addition was made to the wild life of the parks by the introduction of a herd of elk which was secured through the courtesy of the United States Government from Yellowstone park, Wyoming. Owing to the severe winter the elk herd in that park were threatened with starvation and an opportunity was offered the Canadian Government of obtaining several hundreds of these animals. The elk were brought over in very severe weather but suffered only a small percentage of loss. They were liberated in Rocky Mountains and Jasper parks and up to the present appear to be doing well.

Buffalo.—The main herd of buffalo in Buffalo park by actual count numbered 4,868 at the end of the fiscal year. The decrease for the year was 41. Of this number 21 were slaughtered to save valuable heads and hides and 20 died, mostly through injuries caused by fighting. The superintendent reports that fully 50 per cent of the main herd are bulls. As the proper proportion between the two sexes in a buffalo herd is one bull to every two cows, there are at least 1,000 surplus males. This tends to weaken the strength of the herd. During the past year investigations have been

carried on with a view to the commercial disposal of the surplus males in the immediate future. A test lot of mounted heads was sold by public auction at the Canadian fur sales at Montreal last March and brought the following prices: Small buffalo bull head, \$300; medium buffalo bull head, \$610; and large buffalo bull head, \$1,025. Owing to the use of limousines by the wealthy there is less demand for robes than formerly; however, good hides dressed for robe purposes sold last March in Montreal for \$120 each.

It has also been demonstrated by practical tests that, when properly treated, excellent sole leather for boots can be made of the buffalo hides. The leather is both strong and flexible and is said to be as valuable as good cowhide. Owing to the present scarcity of leather it appears that buffalo hides will find a ready market for this purpose if unsuitable for robes or other purposes.

Experiments in a small way have also been carried on with a view to the utilization of buffalo wool and the results are very promising. There are some difficulties in manufacture through the admixture of coarse hair but inquiries indicate that existing machinery can be adapted to handle this problem. One of the outstanding features of the yarn is its extraordinary strength. While it may not be suitable for the finer grades of woollen products there seems a good future for it with respect to coarser articles.

The Department of Agriculture in connection with its cattalo experiments, last winter submitted samples of buffalo and cattalo meat of the same age and condition to twenty-six householders with a view to securing opinions as to the palatability of these meats compared with domestic beef. Only three persons declared the domestic beef superior in taste, the preponderance of opinion favouring the buffalo beef. There is reason to believe, therefore, that a market may be developed without great difficulty by the sale of buffalo for meat purposes.

A request was received during the year from Prof. A. N. Shaw, of the Department of Animal Husbandry, University of Saskatchewan, to take six buffalo calves from those born this season with a view to making experiments in domestication. As is well known, attempts to tame buffalo have been successful in individual cases in the past but it is the hope of the Animal Husbandry Department to continue the experiments until a domestic strain has been produced. Permission for the granting of the necessary calves has been granted and the experiments will be watched with much interest.

PARK FARM.

The farm maintained in connection with Buffalo park continues to prove a financial asset. Last year about 400 acres were seeded to oats and 200 acres were summer fallowed. The season's operations resulted as follows:—

Oat crop—8,000 bushels, of which 1,700 were fed to animals, remaining 6,300 threshed, value 90 cents per bushel.. . . .	\$ 5,670 00
Hay—500 tons at \$35 per ton.. . . .	17,500 00
Total (exclusive 1,700 bushels fed to animals, and straw).	<u>\$23,170 00</u>

Antelope.—The Government prong-horned antelope herd at Nemiskam, Alberta, continues to thrive and attracts many visitors. Under the supervision of a caretaker who keeps fences in repair and patrols the reservation, the original 42 antelope have increased to about 100 and, owing to the fact that the reserve contains practically everything needed in the way of vegetation and saline deposits no indication of disease has appeared. So far as known this is the most successful attempt which has yet been made to breed antelope in captivity.

Point Pelee Park.—The results of sanctuary protection are already apparent in Point Pelee park. Although this area was set aside as a park only two years ago it already shows a large increase of animal and bird life. The superintendent reports

an abundance of birds during the season and also large increases during migration. The few coveys of quail which were within the park upon its establishment have increased to over 100. The increase in muskrats is also very satisfactory. During the past year it was estimated that there were 2,000 dwellings with an average of six inhabitants each or a total of 12,000 muskrats in the park. At the prevailing price of skins of from \$4 to \$5 the value of this form of wild life represents over \$50,000. Wild rice and celery are being planted along the shores of the lake with a view to increasing the supply of bird food and efforts are being made to assure the maintenance of normal water levels in order to preserve plant life which forms the food of both wild fowl and muskrats. The destruction caused by carp has also been investigated and steps are being taken to eradicate these fish which have proved to be a dangerous enemy to several forms of wild life.

HISTORIC AND PRE-HISTORIC SITES.

The work with respect to the preservation of historic and pre-historic sites, which had been laid aside on account of the war, was resumed during the year and an important step taken in this connection. This was the formation of what is known as the Historic Sites and Monuments Board. In carrying on this work it had been found that the development of a policy covering so wide a field demanded expert knowledge with regard to practically all the historic sites in Canada and their relative value. The Government, therefore, thought it advisable to endeavour to secure the assistance of experts intimately acquainted with these matters and a number of prominent Canadian historians kindly consented to serve as members of an advisory board. The board, which serves without remuneration, is composed of the following: Chairman, Brigadier-General E. A. Cruikshank, Ottawa; Dr. James H. Coyne, St. Thomas, Ontario; Dr. Benjamin Sulte, Ottawa; Archdeacon W. O. Raymond, St. John, N.B.; W. C. Milner, Halifax, N.S.; and the Commissioner of Dominion Parks. The initial meeting was held in Ottawa in October, 1919, when it was decided that the first matter which required to be undertaken was a comprehensive survey of Canadian historic sites. This is now being made by the members. When this survey is completed the board will be in a position to advise the department as to which sites should receive attention from the Federal Government and what work in connection with them should be undertaken. In addition to the meetings of the general board which it is expected will not be held more than once or twice a year, the members resident in Ottawa meet to discuss details when occasion arises.

The co-operation of historical societies and other associations, public libraries, etc., interested in the preservation of the Dominion's historical remains was solicited and the response received was very gratifying. A design for an artistic tablet to be used in connection with the marking of existing remains as well as of a cairn which is to be erected at sites where there are no remains are in course of preparation.

PUBLICITY.

Owing to the restricted appropriations no new parks literature was issued during the year. The large number of requests for pamphlets, however, has practically exhausted all our editions and fresh publications will have to be considered for the coming year. Material for some of these is now in course of compilation. A series of news items was furnished for the British press and a number of articles prepared for Canadian and United States magazines. In co-operation with the Exhibits and Publicity Branch of the Department of Trade and Commerce, several films taken in the different parks were edited. Over a thousand coloured slides were loaned for lecture purposes and lecture material supplied. Illustrated lectures were also given by officials of the branch and several hundred photographs and enlargements were sent out on request.

ST. LAWRENCE ISLAND PARKS.

An important addition was made to the St. Lawrence Island parks by the purchase of what was formerly known as Doran's or Sheep island, directly opposite the town of Morrisburg. This island which was originally part of the St. Regis Indian Reserve, had been leased by the Indians for a term of years to a private individual. At the expiration of the lease the Department of the Interior requested the Department of Indian Affairs to be allowed to acquire it for parks purposes. The island has been named Broder park in memory of the late Andrew Broder, who for many years represented Dundas in the House of Commons. It is one of the finest of the island reservations, covering about twenty acres, well wooded, and possessing a good bathing beach as well as suitable grounds for baseball and other sports.

VISIT OF THE PRINCE OF WALES.

His Royal Highness the Prince of Wales with his staff spent five days in the parks on his tour through the West in September. On his arrival at Banff he was met by guards of honour composed of local war veterans, Stoney Indians and Mounted Police. In reply to the address of welcome on behalf of the English residents of the park His Royal Highness said in part:—

“It is a very great pleasure for me to be setting foot for the first time in this wonderful park, and I thank you most sincerely for your cordial welcome which has touched me very much.

“I have long looked forward to seeing for myself the wonderful scenery which surrounds you here. Its grandeur and its beauty have drawn visitors for many years from all parts of the world and I am glad to think that a very large proportion of those visitors has come from the British Isles. The numbers who come here in future must continually increase and you may rely on me not only to spread the knowledge of your attractions in Great Britain when I return, but to come here again myself whenever the opportunity occurs.

“I thank you for your warm expression of loyalty to my father, the King, who retains the happiest memories of his visit to Banff. The Canadian Government has deserved well of the people of Canada in preserving this wonderful district in all its natural beauty for generations to come. I hope that it will be a place of rest and refreshment within the reach of increasing numbers of every class as the years go on.”

After the ceremony in English an address of welcome in the Stoney language was presented and His Royal Highness was made a chief of the tribe with the title “Chief Morning Star.”

PROTECTION OF MIGRATORY BIRDS.

The organization for the enforcement of the Migratory Birds Convention Act in Canada was gradually expanded to meet existing conditions during the fiscal year 1919-20. Obviously the localities requiring the most attention were those in which provincial law was not in conformity with the treaty with respect to the protection of migratory birds. For this reason, the first steps in the development of the federal service were taken in the Maritime Provinces. The province of New Brunswick repealed its laws protecting migratory birds about the time that the federal Act was passed. The province of Nova Scotia, although making its law conform with the treaty in other respects, provides no protection for the sea ducks, and although the province of Prince Edward Island concurred in the Migratory Bird Treaty, its laws do not yet conform with that treaty, nor with the federal law.

A temporary staff of migratory bird wardens was organized in the Maritime Provinces in March and April, 1919, consisting of nine full-time and two part-time men. Of these men, one was placed in charge of the migratory bird work in each of the Maritime Provinces. Returned soldiers were appointed to fill all the full time positions and although not specially familiar with the birds, their work was uniformly of an excellent character, both with regard to publicity concerning the law and law enforcement.

During the fall of 1919, examinations were held by the Civil Service Commission, and the migratory bird warden staff in the Maritime Provinces was made permanent.

A staff of honorary game officers is being appointed throughout Canada to serve primarily as an information service. These officers are given the authority of game officers with the power of police constables under the Act and can consequently enforce the law in their own localities. At the present time many districts, especially those surrounding the larger cities, are well patrolled by this staff which now consists of about sixty-three officers and which it is expected will be augmented until there will be a bird friend in practically every community. Persons interested in the protection of our native birds can render a great service by undertaking this work. Although the positions are purely of an honorary nature, these officers are entitled by law to one-half of the penalty imposed in cases which they may bring to court.

The extension of the jurisdiction of the Royal Canadian Mounted Police to the whole of Canada will prove, without doubt, an important factor in the operation of this bird protective measure. Steps are now being taken to have all members of this force made game officers under the Act. The Department of the Naval Service has also offered to assist by having officers on its patrol boats made game officers, and it is believed, that this will prove of great assistance in having the law observed in such localities as the north shore of the gulf of St. Lawrence where many complaints have originated in the past.

Officers of the branch have co-operated with the preventive officer of the Department of Customs, which department is in charge of the enforcement of the prohibition which has been placed upon the import of wild bird plumage. An officer of the Department of Indian Affairs has also assisted the Parks Branch by acting as a game warden on the Quebec Labrador coast.

The trumpeter swan, which has long been considered almost if not quite extinct, was found to be wintering in numbers in southern British Columbia, and a temporary part-time game officer was appointed to see that these birds were unmolested. This appointment has been justified and it is a pleasure to report that the birds have now returned to their northern breeding ground without mishap.

EDUCATIONAL WORK.

The work of educating the public with regard to bird protection has been carried on vigorously during the year. Seven pamphlets in English and six in French have been distributed. In almost all cases these have been sent first of all to the press throughout Canada and the press have reprinted them so widely that they have reached an enormous number of people. The number of each pamphlet printed has ranged from five to fifteen thousand, and they have been distributed where it was believed they would do the most good. Special care has been taken to place schools and educational institutions on the mailing list. The titles of the pamphlets already distributed are as follows:—

Canada's Feathered Friends, by Hoyes Lloyd.

Vanished and Vanishing Birds, by P. A. Taverner.

Why Canada and the United States Combined to Stop Spring Shooting, by J. H. Fleming.

No Spring Shooting Means More Migratory Game, by Hoyes Lloyd.

The German Badge of Cruelty, by Hoyes Lloyd.

The Brant of the Atlantic Coast, by Dr. R. M. Anderson.

Protection of Bird Neighbours, by Hoyes Lloyd.

Les Oiseaux Amis Du Canada, par Hoyes Lloyd.

Les Oiseaux Disparus Et Ceux Qui Sont A La Veille De Disparaitre, par P. A. Taverner.

Pourquoi Le Canada Et Les Etats-Unis Se Sont Unis Pour Mettre Fin a La Chasse Du Printemps, par J. H. Fleming.

La Prohibition De La Chasse Au Printemps Assure Une Plus Grande Quantite De Gibier Migrateur, par Hoyes Lloyd.

La Bernache Commune De La Cote De L'Atlantique, par R. M. Anderson.

Les Oiseaux Savages, par Hoyes Lloyd.

The total distribution to date has been 70,500 numbers and a supply of about 50,000 of these pamphlets still remains in stock.

Whereas the pamphlets have been written from a general point of view, many articles have been furnished the press which deal more particularly with local conditions. These have usually been printed by the press, which has given excellent support in this work whenever asked. Press articles of this nature have been furnished on such subjects as the destruction of crops by geese, the abolition of spring shooting, the band-tailed pigeon of the Pacific coast. An extract of the Canadian federal game laws was furnished the press of Newfoundland so that Newfoundland fishermen would be familiar with and observe this law when in Canadian waters.

A very successful series of lectures was given at the Canadian National Exhibition at Toronto, and the Central Canada Exhibition, Ottawa, and in addition a number of lectures were delivered to various societies. These have all been illustrated by motion pictures or lantern slides, and occasionally both have been used. The total number of lectures by the head office staff of the division during the year has amounted to more than thirty.

In co-operation with the Exhibits and Publicity Bureau of the Department of Trade and Commerce a number of motion picture films have been prepared. These include a very interesting picture of the pelicans and other birds at Johnson lake, Saskatchewan, which has been widely distributed under the title of "A Bird City." Another film, which shows the wonderful results obtained by Mr. and Mrs. J. C. Middleton, of London, Ont., in feeding wild birds will shortly appear under the title "Our Wild Life." The year's work in this line was closed by a picture which may yet prove to be one of the most wonderful of recent wild life pictures. After overcoming great difficulties because of the wariness of the birds, a splendid film showing the trumpeter swans wintering in British Columbia has been taken and is now being prepared for distribution.

BIRD SANCTUARIES.

Much time has been spent in listing the lands to be included in bird sanctuaries, in the West and, now that these lists are practically complete, the creation and control of this great series of sanctuaries should go forward at once. Sanctuaries to protect the breeding grounds of the waterfowl of North America are certainly essential, especially when we consider that the United States is providing similar sanctuaries to protect our birds on migration and on their winter feeding ground.

PROSECUTIONS.

Although most of our efforts have been centred upon acquainting the public with the law and with the desirability of protecting our valuable bird life, it has been

necessary upon some occasions to take court action against offenders under this law. Officers of the branch have prosecuted sixteen cases, one of which was appealed, and sixteen fines have been imposed by the court amounting to one hundred and seventy dollars (\$170). Confiscations of arms, plumage for millinery purposes, and game in cold storage amounted to eight lots. It is hoped that the publicity given these cases will have a beneficial effect in preventing further breaches of the law in the same localities.

INVESTIGATIONS.

Several investigations have been made, because birds were reported to be seriously damaging crops. In one locality, during the spring of 1919, complaints were very numerous against Canada geese, which were said to be destroying the growing fall wheat. After the fall wheat was well grown, an officer of the Department of Agriculture inspected the fields reported to be damaged, and he placed the total damage done by the birds at eight dollars (\$8). Similar complaints were received concerning the band-tailed pigeons in British Columbia. As the band-tailed pigeon is one of the species given special protection by the treaty, it was not felt that any action should be taken upon such complaints, unless the damage caused was really serious. As a matter of fact, one permit was issued to take these birds, but none were taken under it. Fifty-one permits were issued to take migratory birds for scientific purposes, although no birds were taken under many of these permits. It is felt that there are still many persons who do a certain amount of ornithological collecting who have not taken out permits.

WOOD BUFFALO PATROL.

The wood buffalo patrol to protect these animals in northern Alberta and the adjoining section of the Northwest Territories in the vicinity of Fort Smith was maintained throughout the year. Wolves are apparently a serious menace to this herd, and it is possible that special action should be taken to control them on the Buffalo Range. Trails have been cut and cabins are being built by the officers of the patrol, so that they can make frequent trips through the main area occupied by the buffalo. Their equipment is being improved, and horses furnished them, so that the patrol will have means of transport and remain at a maximum efficiency.

NORTHWEST GAME ACT.

The Royal Canadian Mounted Police have continued to administer this Act throughout the year, and, now that the inhabitants of the territory have been made acquainted with the provisions of the law, its effect should be felt. Licenses under the Act have been issued, as follows:—

LICENSES ISSUED.

Resident Hunting.	Trading.	Non- Resident Hunting.	British Trading.	Non- Resident Hunting.	Non- British Trading.
24	34	3	1	5	0
21	71	2	1	6	1
40	10	11	1	5	0
5	18	1	0	1	1
18	9	0	0	5	6
8	3	0	0	0	0
15	8	1	1	0	1
<hr/> 131	<hr/> 153	<hr/> 18	<hr/> 4	<hr/> 22	<hr/> 9

The fur returns for the year ending June 30, 1919, are yet far from complete, but the summary reported to date is given below:—

Moose..	80	Lynx..	161
Caribou..	55	Skunks..	162
Deer..	4	Ermines..	2,850
Otter..	122	Bears..	430
Beaver..	3,257	Foxes..	847
Marten..	5,539	Red Fox..	34
Fisher..	47	Blue Fox..	24
Mink..	1,311	Cross Fox..	5
Muskrat..	50,578	Silver Fox..	3
Wolves..	193	Black Bear..	15
White Fox..	4,764	Brown Bear..	4
Wolverines..	370		

In connection with the general interest in fur farming, it may be of interest to mention that one such farm is being operated in the vicinity of Great Bear Lake, Northwest Territories. The regulations under the Northwest Game Act have been amended to prevent hunters and trappers other than Indians and Eskimos from operating in Banks Island, Northwest Territories, and a further amendment to the regulations allows the remission of fees for hunting licenses to members of the Royal Canadian Mounted Police when on duty in the Territories.

An amendment to the Act itself has been proposed, as it appeared that the open season for muskrat, north of latitude 64, closed on the 14th day of May, and the new amendment allows this animal to be taken until June 14. At the same time, it is proposed to amend the Act so that similar adjustments in the open season for any species may be made by Order in Council.

The wolf bounty paid during the year amounted to fourteen hundred and eighty dollars (\$1,480), and the gross revenue received for licenses during the year amounted to twenty-four hundred and forty-one dollars (\$2,441).

MUSK-OX, CARIBOU AND REINDEER.

Further investigations with respect to the caribou and musk-ox emphasized their probable future importance as factors in developing the far north of Canada. The question of preserving and utilizing the millions of caribou as a future meat supply was gone into, as was also the domestication of the musk-ox and the development of musk-ox herds both for food and fur purposes. It is claimed that musk-ox meat is quite as good as prime beef, while the wool, which is somewhat similar to buffalo wool, is well adapted for many kinds of manufactures. The physiological identity of the Barren Land caribou with domestic reindeer also appeared to indicate the possibility of successfully establishing a reindeer industry in the far north. The whole matter involved so many considerations and appeared to be of such importance to a future policy of development that the minister decided to appoint a Royal commission to investigate it. The commission expects to conclude its sittings in the near future and its report will no doubt form a valuable basis for a future policy with respect to the various questions involved.

APPENDIX No. 1.

REPORT OF THE SUPERINTENDENT OF ROCKY MOUNTAINS PARK,
J. M. WARDLE, BANFF, ALBERTA.

As was expected the end of the war resulted in a large increase in the tourist traffic to the Rocky Mountains park, the season of 1919-20 being generally conceded the best Banff has yet experienced. This increase was largely due to the revival of tourist travel by rail. While the total numbers did not reach the figures of 1915—the year of the Pacific Coast exhibitions—it was noticeable that visitors tended to make a much longer stay in the parks than formerly. At Banff and Lake Louise an increasingly large number of people remained from one to two months. During July and August and a good part of September accommodation in the hotels and lodging-houses of the park was taxed to the limit.

Owing to the exceptionally dry summer motor traffic from the prairies showed no increase over the previous year, the number of outside cars visiting the park remaining about the same. About ten miles of road in the Morley Indian reserve were graded by the provincial government in July and August and as the weather was unusually dry, this road was very soft and dusty until the fall and this no doubt reduced the number of motorists to the park from Calgary.

The season throughout all the western provinces was a particularly trying one for all types of earth and gravel roads owing to the absolute lack of rain during the spring and early summer. The park roads were similarly taxed and a great deal of maintenance work was found necessary, week-end traffic being particularly destructive to the dry and dusty road surfaces. Despite the many difficulties experienced, all the park roads were kept in good condition. The few days' rain in August improved matters greatly and from that time to the end of the season the roads were in better condition than ever before. The difficulty of road maintenance in dry weather resulted in the decision to apply light road oil to the surface of sections of the main road in the park next season.

AUTOMOBILES.

While there was no increase in the number of cars entering the park as compared with last year, the motor traffic was large and, as usual, the officials registering the cars at the Entrance Arch were rushed during the week-ends.

The following is a summary of the licenses issued:—

One thousand nine hundred and seventy-eight transient licenses (1,181 from Calgary, 87 from Edmonton, and 710 from other points); 64 park residents auto licenses (including Government cars); 85 park auto livery licenses; 5 motor-cycle licenses (including free license for R.C.M.P.); 74 non-resident season auto licenses; 17 auto license transfers; 123 chauffeur licenses.

BANFF TOWNSITE.

Considerable improvement was effected in the streets of the town during the year. Several streets, including portions of Muskrat, Rabbit, Bear and Caribou streets, were graded or regraded and surfaced with gravel, a steam roller being used for consolidation purposes. The rocmac surface of Banff avenue, Caribou and Lynx streets was treated with 60 per cent liquid asphalt. This work was completed in June and gave very satisfactory results. It is hoped to re-coat these streets each year until a good



At Moraine Lake. Valley of the Ten Peaks.

wearing thickness of asphalt mat is obtained. The surface of Cave and Spray avenues and the Golf Links road was improved and repaired by scarifying and rerolling. The latter road was treated with 40 per cent road oil, and a portion of Cave avenue with 60 per cent oil. Spray avenue was given one coating of waste fuel oil with satisfactory results.

A much needed sewer main on Grizzly street, between Cariboo and Wolverine streets, was laid during the year, and both water and sewer services were extended to several private houses.

FIRE BRIGADE.

The fire brigade, which had suffered in personnel and efficiency during the war, showed considerable improvement by the fall of the year. Some very useful equipment was added to the fire hall, including new hose, fire hooks, gas masks, extension ladders and a life net.



Looking south from Northeast ridge of Mt. Thomson, 11 miles north-northwest of Lake Louise.
Bow lake with Bow peak (9,184) to the south and in the distance Mt. Hector (11,125.)

Dr. Chas. Walcott.

LIGHTING AND TELEPHONE.

Owing to a lengthy general strike at the Bankhead Mines, Banff was without electric power in the daylight hours from May until September. This was a great inconvenience to the people of the town and to business houses. The experience was another argument in favour of the construction of a power plant by the department as soon as finances permit.

A very busy year was experienced by the telephone service, the volume of business handled taxing the system to its utmost. Late in the year authority was granted to have an expert survey made of the present telephone system and plans prepared for new and more up-to-date lines and exchange.

A complete report was made on the present and proposed systems, and steps have already been taken towards the early establishment of an enlarged system.

ANIMAL ENCLOSURES AND ZOO.

Increases were reported during the year in the number of moose, elk, yak, Rocky Mountain goat and sheep confined in the various paddocks. All the above animals are thriving in their roomy enclosures. Through the courtesy of the 31st Battalion, C.E.F., of Calgary, a Siberian pony was added to the other interesting animals at the buffalo park. This pony was captured by the Germans in one of the Mazurian lakes engagements, and was in turn taken from the Germans by the above battalion at Amiens in 1918. A noteworthy fact was the importation of 192 elk from Yellowstone National Park, U.S.A. Owing to the severe winter and lack of feed many elk in Yellowstone were dying of starvation, and an opportunity was afforded the Dominion Parks Branch of securing several hundreds of these splendid animals. The elk for the Rocky Mountains park were brought in by rail and liberated at Massive and Duthill.

ZOO.

Through the courtesy of Superintendent Pennefather, of the Royal Canadian Mounted Police, of Lethbridge, a swan was added to the collection of birds. A badger, beaver and mink were secured during the season and two baby porcupines were born in captivity.

The following animals are at present confined in the animal enclosures and zoo:—

Enclosures.—6 buffalo, 13 moose, 29 elk, 1 Persian sheep, 11 Angora goats, 22 Rocky Mountain sheep, 6 Rocky Mountain goats, 49 four-horned sheep, 17 yak, 1 Siberian pony.

Zoo Animals.—1 polar bear, 2 grizzly bears, 3 black bears, 1 cinnamon bear, 1 timber wolf, 3 coyotes, 2 wolverines, 3 porcupines, 2 bobcats, 4 red foxes, 2 badgers, 2 Rhesus monkeys, 4 pine marten, 1 mink.

Zoo Birds.—2 owls, 2 ground owls, 1 bald eagle, 1 golden eagle, 1 pea fowl, 1 Amherst pheasant, 1 ring neck pheasant, 2 Canada geese, 1 swan, 1 common duck.

GOVERNMENT BATHS.

The past season for the two Government bathing establishments was one of the most successful ever experienced. During June, July and August both the Cave and Basin bath-house and the Upper Hot Springs had as many bathers as could be handled by the present staff. For several weeks the Cave and Basin averaged 600 bathers per day, and on July 19, 896 bathers passed through the turnstile. The number of bathers at the two bath-houses during the past year was as follows:—

	1919-20.	1918-19.
Cave and Basin.. . . .	38,917	32,238
Upper Hot Springs.. . . .	24,221	24,698

GOLF LINKS.

Seeding and regular watering of the fairways of the golf course were done for the first time during the past season. The result was very satisfactory. Without the regular watering of the fairways the course would have suffered greatly during the long dry summer. In the fall of the year construction was commenced on the eighteen-hole course as laid out by Mr. Donald Ross, the well-known golf architect of Chicago, and was carried on throughout the winter. When completed the new course will be one of the best in Canada and unequalled as regards location and scenic advantages. From a golfing standpoint the past season was undoubtedly the

most successful yet experienced. The excellent condition of the greens during the season and the marked improvement in the fairways was a source of expressed satisfaction to all golfers who visited the course. The links were particularly honoured during the season by H.R.H. the Prince of Wales who, with his staff, played several rounds, and, later, by the Governor General's party. The following figures indicate the increase in the number of visitors to the golf course as compared with the previous year:—

	1919.	1918.
Receipts.. . . .	\$2,941	\$2,064
Season tickets.. . . .	88	76
Tourists' tickets.. . . .	3,839	2,312
Rounds played on season tickets.. . . .	3,761	2,985
Total rounds played.. . . .	7,510	5,281

FIRE AND GAME PROTECTION.

The dry summer of 1919 gave cause for a good deal of anxiety as regards forest fires. Numerous fires occurred in the park, but fortunately, due to prompt action,



Wolverine Pass with Mt. Gray on the left and Mt. Drysdale on the right.

Photo. Dr. Chas. Walcott.

little damage was done. The month of July was a particularly bad one for fires, four breaking out and being fought at one time. Owing to the preparedness and promptness of the fire and game wardens, the majority of fires were checked before well started.

Owing to the fact that the park wardens were continually on fire patrol, trail maintenance work was not as extensive as usual.

No serious infraction of the game regulations was discovered during the year although there were several minor convictions.

The telephone line to the Kananaskis cabin via Canmore and the Deadman's cabin, which was begun in the fall of 1918, was completed early in the season.

FISHING.

Experienced park anglers and others report that the fishing season of 1919 was an exceptionally good one in all park waters. The fishery inspector also reports that more game fish were taken this year than any other. On several occasions when conditions were favourable, fishing in the Bow river near the golf links was excellent, the limit of catch being taken in two or three hours with the fly. In May and June, fishing was very good at lake Minnewanka, a large trout weighing over twenty-six pounds being taken by the troll. The Dominion Fish Hatchery, under the direction of the Department of Naval Service, continued operations during the year. A summary of its work is given herewith:—

DISTRIBUTION FROM THE DOMINION FISH HATCHERY AT BANFF, ALTA., 1919.

	Atlantic Salmon Fry.	Cutthroat Trout Advanced Fry.	Rainbow Trout Advanced Fry.	Rainbow Trout Finger- lings.	Salmon Trout Fry.	Salmon Trout Finger- lings.
Boom lake.. . . . .	.....	10,000	.....	.....	.....	—
Bow river, at Sawback.. . . .	.....	13,395	.....	.....	.....	—
Forty-mile creek.. . . . .	.....	15,000	.....	6,575	.....	—
High river, Middle Fork.. . . .	.....	.....	50,000	.....	.....	—
Jumping Pond, near Cochrane.. .	.....	.....	50,000	.....	.....	—
Massive creek.. . . . .	.....	10,000	.....	.....	.....	—
Red Earth creek.. . . . .	.....	.....	.....	5,000	.....	—
Jasper park—						
Hibernia lake.. . . . .	.....	.....	.....	4,000	.....	—
Marjorie lake.. . . . .	.....	.....	.....	4,000	.....	—
Patricia lake .. . . . .	.....	.....	.....	2,000	.....	—
Pyramid lake .. . . . .	.....	.....	.....	.....	.....	5,000
Johnston lake.. . . . .	.....	.....	10,000	.....	.....	—
Lake McGregor.. . . . .	.....	.....	15,000	.....	.....	—
Lake Minnewanka	154,574	.....	.....	.....	185,000	701
Summit lake, near Revelstoke, B.C.. . . . .	.....	.....	20,000	.....	.....	—
	154,574	48,395	145,000	21,575	185,000	5,701
Total distribution..					560,245	

DISTRIBUTION OF FRY FROM THE DOMINION FISH HATCHERY AT SPRAY LAKES, ALTA., 1919.

	Cutthroat Trout Fry.
Spray lakes—	
Bay near hatchery..	10,541
Shallows along shore..	25,000
Small creek at head of lake..	35,000
	70,541

TIMBER AND GRAZING.

More dry timber permits were issued than in previous years, several parties being engaged in cutting out dry timber for mine props and firewood at Castle and in the vicinity of Banff.

Twenty-five permits were issued during the season covering approximately 308,378 lineal feet of dead timber. In addition cordwood cut in the park totalled as follows:—

For residents' use..	150½ cords.
For government use..	60 "

Eighty-one grazing permits were issued during the year, covering the grazing of 175 horses and 204 cows.

ROADS AND BRIDGES.

Improvement work on the Banff-Castle road and the Banff-Kananaskis road was continued during the season. Several miles of the former road were gravelled and improvements in alignment and grades were made on the east road. Maintenance work required was very heavy and was carried on in addition to improvement work. On the Tunnel Mountain road a diversion of 1,700 feet was constructed around the "Corkscrew" drive so that this road could be thrown open to one-way motor traffic. With the building of this diversion one of the best drives in the vicinity of Banff is opened to motorists. Maintenance work was done on the other roads in the vicinity of Banff, including the Loop drive, Hot Springs road, and Sundance canyon road. Construction on the new road from Castle to Lake Louise was carried on by contract under direction of park highway engineers. Owing to a late start only a small portion of the road was built.

CANMORE TOWNSITE.

The road from Canmore townsite to the Canadian Pacific Railway station was gravelled, and minor repairs were made to the main street. One or two stretches of sidewalk were also repaired.



Mt. Edith Pinnacles from Edith Pass, 4 miles from Banff.

Photo Dr. Chas. Walcott.

LICENSES AND BUILDING PERMITS.

The following licenses were issued in the Rocky Mountains park during the past year: 50 rowboat licenses, 3 motor-launch licenses, 1 steamboat license, 5 boatsman licenses, 24 guide licenses, 17 horse livery licenses, 19 driver licenses, 21 tea room licenses, 4 pool room licenses, 1 bowling alley license, 102 dog licenses, 32 peddler licenses, 3 gum machine licenses, 9 butcher licenses, 2 moving picture theatre licenses, 3 moving picture operators licenses, 2 tent circus licenses.

During the past year 59 building permits were issued in the park and the estimated cost of the work done amounted to \$32,250.

HEALTH.

During the busy season Banff and all other points in the park were particularly free from sickness and contagious diseases. The medical health officer reports that he has never seen a season more free from sickness.

GENERAL.

The Rocky Mountains park had more than the usual number of distinguished visitors during the season of 1919-20. First among these was H.R.H. the Prince of Wales, who stayed three days in the Rocky Mountains park, September 17, 18 and 19. Arriving in Banff on the morning of the 17th—a perfect day—His Royal Highness was welcomed at the station by the whole population of Banff and Bankhead and guards of honour of local War Veterans, Stoney Indians, and Mounted Police.

Accompanied by a mounted escort, the Prince was then motored to the buffalo park, where a formal address of welcome on behalf of the citizens of Banff and the officials of the Dominion Parks Branch was tendered by the superintendent of the park. After his reply to the address of welcome His Royal Highness was made a chief of the Stoney Indians by other chiefs of the tribe with the title of "Chief Morning Star."

The Stoney Indians, of whom there were about 200 present in full native costume, then staged a number of contests in honour of their new chief, including horse racing, broncho busting, foot racing and archery.

After the formal morning ceremony His Royal Highness spent the afternoon on the Government golf course. The following morning His Royal Highness also spent on the links, leaving by the Royal train for Lake Louise on the afternoon of September 18.

On October 20 and 21 the Rocky Mountains Park was further honoured by the visit of the Duke of Devonshire, Governor General of Canada, accompanied by Her Grace the Duchess of Devonshire and Lady Dorothy Cavendish. The Vice-Regal party was taken in motor cars to Johnston canyon and Moraine Lake, and by special request conducted to the top of Sulphur mountain. The splendid view from the Observatory at the summit of the mountain was much appreciated and the members of the party declared themselves well repaid for the climb.

As usual, Banff was visited by numerous conventions and delegations during the summer months, among these being the Fire Chiefs' Convention, Druggists' Convention, Industrial Congress, and Associated Press Delegates.

Several touring parties also passed through the park, the chief among these being a party under the management of the "Brooklyn Eagle," of Brooklyn, N.Y.

This party, which also toured through all the national parks of the United States, voted on the parks they considered best—Rocky Mountains park of Canada heading the list, while the Banff Springs Hotel was considered the best hotel.

WINTER CARNIVAL.

The Banff Winter Carnival, which closed on the 14th January, was very successful. A record number of entries in the various competitions was received from outside points. The Banff ski-jump for men is stated to be the fourth best in America and the boys' ski-jump is the best in America. The longest jump made at Banff was 187 feet. On the boys' jump, a world's record of 114 feet 6 inches was made.

APPENDIX No. 1a.

VISITORS TO ROCKY MOUNTAINS PARK FROM APRIL 1, 1919 TO MARCH 31, 1920.

BANFF SPRINGS HOTEL, Banff, Alta., Season, 1919.		CHATEAU LAKE LOUISE, Lake Louise, Alta.	
Canada.....	3,766	Canada.....	2,146
Newfoundland.....	2	Newfoundland.....	1
United States.....	6,368	United States.....	9,799
Alaska.....	3	Alaska.....	4
West Indies.....	8	West Indies.....	33
Java.....	4	Java.....	5
South America.....	1	Mexico and Central America.....	2
England.....	244	England.....	285
Ireland.....	1	France.....	28
France.....	13	Holland.....	27
Holland.....	10	Other European countries.....	24
Other European countries.....	27	Australia.....	123
Australia.....	154	New Zealand.....	53
New Zealand.....	57	China.....	113
China.....	97	India.....	16
India.....	31	Hawaii.....	53
Hawaii.....	17	Philippine Islands.....	5
Philippine Islands.....	12	Japan.....	20
Japan.....	31	Africa.....	2
Unlocated.....	123	Unlocated.....	221
Conducted parties (otherwise unlocated).....	208	Total, 1919.....	12,960
Total, 1919.....	11,177	Total, 1918.....	4,454
Total, 1918.....	6,364	Increase.....	8,506
Increase.....	4,813		

HOT SPRINGS HOTEL, BANFF (Open all year).		SANITARIUM HOTEL (Open May 15 to September 15).	
Canada.....	521	Canada.....	3,213
United States.....	24	United States of America.....	1,000
England.....	1	Australia.....	27
New South Wales.....	1	England.....	17
Australia.....	2	France.....	9
New Zealand.....	1	Japan.....	12
Total.....	550	China.....	4
		Total.....	4,282

HOMESTEAD HOTEL, BANFF (Open May 15 to September 28).		KING EDWARD HOTEL, BANFF (Open all year).	
Canada.....	2,126	Canada.....	6,890
United States.....	215	United States.....	510
England.....	12	England.....	60
Australia.....	4	Other countries.....	300
New Zealand.....	3	Total.....	7,750
France.....	1		
Total.....	2,361		



The primula which is found on the wet banks of many rivers.
Photo Mrs Wm Warren.



Spring Beauties. Photo Mrs. Wm. Warren.

MOUNT ROYAL HOTEL, BANFF (Open
from May 15).

Canada.. . . .	5,427
United States.. . . .	437
England.. . . .	45
Other countries.. . . .	341

Total.. . . .	6,250
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ALBERTA HOTEL (Open two months).

Approx. 3,500 persons.

SUMMARY.

Banff Springs Hotel.. . . .	11,177
Chateau Lake Louise.. . . .	12,960
King Edward Hotel.. . . .	7,750
Mount Royal Hotel.. . . .	6,250
Sanitarium Hotel.. . . .	4,282
Alberta Hotel.. . . .	3,500
Homestead Hotel.. . . .	2,361
Hot Springs.. . . .	550
Summer cottagers and campers.. . . .	6,000
Motorists.. . . .	10,000
Excursionists.. . . .	5,000
Total.. . . .	69,830

APPENDIX No. 1b.

REPORT OF THE SECRETARY OF THE ALPINE CLUB OF CANADA,
BANFF, ALTA.

The Alpine Club House at Banff was open to members and their friends during the entire summer season. In spite of the very high rates of travel the attendance was good and the average visit of some duration. Visitors from Europe as well as from Canada and the United States came for varying periods and the number of seekers for information was as large as ever.

Mount Norquay continued to prove the most attractive of the neighbouring climbs. Mount Edith was climbed by at least one lady member as well as by men as training for more arduous work to come later on.

The usual ascents of the mountains surrounding lake Louise were made by members, and Mr. Val. A. Fynn was indefatigable in hunting for new routes. Dr. and Mrs. Stone climbed Pinnacle in part by a new route.

First ascents were made in the country to the south by club members. Dr. J. W. A. Hickson made the first ascent of Mount Sir Douglas and Mr. Fynn of Mount King George. As soon as new country is mapped in the Canadian Rockies members of the Canadian club find their way to the peaks and the accounts of their expeditions, related with authority in the *Canadian Alpine Journal*, are read all over the world, and serve to create new interest and attract new visitors to Canada's national parks. In Glacier park, Mr. and Mrs. MacCarthy not only ascended but descended Mount Sir Donald by the northwest arête without a guide.

During the winter the club took much trouble in organizing its delegation to the Congress of Alpinism summoned to Monaco by the Club Alpin Francais. The mountaineers of Europe will learn much of the wonders Canada has to show. The club again presented a cup for competition at the Banff Winter Carnival. In pursuance of its declared policy of bringing the mountains of Canada before the notice of Canada and of the world at large, its director, as director of events, again lent powerful aid to the success of the meeting.

The visitors to the club house were drawn from the following:—Canada—British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, and Nova Scotia. United States—Connecticut, Indiana, Maryland, Massachusetts, New Jersey, New York and Pennsylvania.

APPENDIX No. 2.

ANNUAL REPORT OF THE SUPERINTENDENT OF YOHO AND GLACIER PARKS, E. N. RUSSELL, FIELD, B.C.

YOHO PARK.

In Yoho park during the past season the need of a large tourist hotel, which we have hitherto had, was much felt and the lack of one prevented many tourists and visitors from staying in the park. The Mount Stephen Hotel, which up to this year has been run as a first-class hotel under the able management of the Canadian Pacific Railway Company, was recently turned over to the management of the railway workers, who completely occupy this large building. This left us almost without accommodation for the travelling public in Field and made it necessary for all persons wishing to stop off, to drive out either to the Emerald Lake Chalet or to the Yoho Camp immediately upon arrival, and as the accommodation at both these places was fairly limited, many were disappointed who wished to stay over. In spite of this, however, the park was well patronized and our drives and trails were all well used.

The Alpine Club of Canada held their annual camp towards the end of July, the main camp being pitched in Yoho pass on the shores of Summit lake, with an outlying camp near the mouth of the Upper Yoho valley. The camp was called "Victory Camp" and the site chosen was that where the first camp of the club was held in 1906. Slightly over one hundred members attended, amongst whom were many members of the club recently returned from overseas. The camp next year which is to be held at mount Assiniboine will be called "Welcome Home Camp" in honour of the returned soldier members of the club who, it is hoped, will then all be able to attend.

For the first time motor-cars and vehicles were allowed to run on certain of the roads in Yoho and Glacier parks and a number of residents availed themselves of this privilege, and brought in cars both for their own use and for hire. All roads in the Yoho park were open for use with the exception of the upper portion of the Yoho road, which the department has decided to throw open next season. The work undertaken in the park during the past year was largely in the way of maintenance and repairs. Some new road construction work was contemplated, but owing to the extreme shortage of labour it was not deemed advisable to undertake this, as the greatest difficulty was experienced in securing even enough men for work of a more urgent nature. This labour shortage became more acute as the summer progressed, absolutely no local labour being available. The new work contemplated was the construction of a motor drive from Hector to the eastern boundary of the park, to form another link on the Field-Banff highway which is now nearing completion. The completion of this road will mean much to Yoho park, rendering all its beautiful scenery and drives accessible by motor to visitors from Alberta and other outside points. It is hoped that during the coming year we may be able to complete this highway.

No new trail work was undertaken but fairly extensive repairs were made on a number of existing trails. The Ottertail, McArthur, lake O'Hara, Burgess pass, Twin falls, Little Yoho and several others were given special attention by a small trail gang, while all the other trails were properly cleaned out by the wardens of the various districts.

In the fall of the year an exchange of land was completed between the Dominion Government and the Canadian Pacific Railway Company, whereby this department acquired a portion of the Canadian Pacific Railway block situated within the town-

site of Field, in exchange for some bottom land to the west of the townsite. The portion taken over by the department will prove a most valuable addition to the townsite, and will fill a long-felt want for suitable building lots. A new roadway was at once constructed through this land connecting the townsite with the bridge crossing the Kickinghorse river, which is now the main road out of the town, the old railway crossing having been closed by order of the Board of Railway Commissioners.



Lake McArthur, Yoho Park.

Photo C. P. R.

On account of the unusual dryness of the season, the fire hazard was greater than has been the case for many years past, and the wardens were kept constantly on the alert. During the months of June and July particularly, fire alarms were very frequent, but due largely to the efficiency of the warden staff and to the thoroughness of the equipment supplied them, we were able to suppress all fires before they assumed large proportions. A total of eleven railway fires and six general fires was reported, and the largest area burned over by any single fire was thirty acres. Our fire pumping units were in constant use and were undoubtedly the means of saving many hundreds of dollars. With the fire engines on the job we could always

be certain that a fire was completely out before leaving it, whereas without means of thoroughly soaking the ground, watchmen would have been necessary in some cases for long periods. For next season the department has approved the purchase of a power speeder for use on the railway track, which will greatly facilitate the prompt dispatch of fire-fighting equipment to the scene of any fires which may be situated in the vicinity of the railway. On the completion of the fire season, the warden staff, under the supervision of the chief warden, started to work on the construction of a number of cabins and stables in different parts of the park.

The policy of the department in retaining the services of the wardens during the winter months in this park is a new one, but now that it has once been started I feel sure that the result of this winter's work will show that the expenditure was well justified. The policy of making a warden's position permanent cannot be too highly recommended as other necessary work can always be undertaken during the winter months and an efficient staff cannot be organized or expected unless these positions are for the year round.

VISITORS.

During the summer we were honoured by a visit from His Royal Highness the Prince of Wales and staff, who spent a full day in the park, and by his democratic manner and winning personality captured the hearts of all who were privileged to meet him.

GLACIER PARK.

The season in the Glacier park is now practically governed by the opening and closing dates of the Glacier Hotel, one of the oldest hotels belonging to the Canadian Pacific Railway Company's system. In the old days before the completion of the Connaught tunnel, when the main line passed by the doors of this hotel, the house was kept open the year round, but now that it has been side-tracked by the diversion of the main line, it is only open for a few months during the summer, when it is usually crowded to capacity. The year past proved no exception to the rule, and from the time the Glacier House opened on June 1, up to the end of the season, it was almost impossible to secure accommodation unless a reservation had been made beforehand.

ROADS AND TRAILS.

During the month of May our wardens were placed on duty and at once commenced the work of cleaning out the trails in their districts. The road from Glacier station to the hotel was also gone over and repaired as was the road to the Nakimu caves. Later in the season a start was made towards converting the abandoned railway grade between Glacier and Rogers pass into a carriage or motor drive. A little over 50 per cent of this work was completed when it had to be discontinued owing to the lack of labour. It is hoped that we may be able to complete this work early next year. It will prove a most popular drive. This section of the new drive-way will be about three and a half miles to the summit of Rogers pass, which was the highest point in the Selkirk range on the old main line of the Canadian Pacific railway previous to the construction of the famous five-mile tunnel running through the heart of Mount MacDonald.

TELEPHONES.

The first telephone line to be constructed in this park by the Department was completed this season, a forest line being run from the warden's cabin at Glacier to the cabin of the caretaker at the Nakimu caves, a distance of about six miles. The last mile and a half of this line lies over a snow-slide-swept area, and it was not



Albert Canyon, Selkirk Range, Glacier Park.

Photo Byron Harmon.

considered feasible to erect a permanent line over this portion. A permanent line was therefore constructed to the end of the timber where the snow-swept-area commenced and from this point connection was made with the caves by insulated military wire laid along the ground. This wire was taken up again in the fall, one warden easily re-winding the one and a half miles in half a day. It will be relaid again each spring, thus eliminating all chance of loss or destruction to material by slides. The line worked most satisfactorily and was a great convenience both to the caretaker at the caves and to the travelling public.

VISITORS.

The number of persons visiting the Nakimu caves showed a considerable increase over the last two years, the registrations being nearly double that of the previous year.

Registrations at Glacier House were more than four times greater than in 1918. The total for 1919 was 2,238 visitors as against 521 in 1918.

APPENDIX No. 2a.

THE ALPINE CLUB OF CANADA.

CAMP IN YOHO PASS.

The Fourteenth Annual Camp of the Alpine Club of Canada was held in Yoho pass on the shore of the lake from July 22 to August 5. It was felt that after the long years of war no more appropriate place could be chosen from which fresh inspiration could be drawn than the site where the very first camp of the club was held in 1906.

The camp was rendered of exceptional interest by the presence of soldier members who had greatly distinguished themselves during the war. The attendance was larger than at any camp since the fateful one of 1914 and vital interest was maintained until the end.

In the midst of a very dry summer the camp experienced a spell of broken weather, rendering plans difficult of execution at any definite date. The sunshine was appreciated and the afternoon thunderstorms accepted with equanimity.

In 1906 the climbs of the Vice-President were made by a most interesting route from Yoho pass but in the intervening years the glacier had shrunk and conditions entirely altered. Though some climbs were made by this route it was found advisable to lead the novice up from the Little Yoho, either by the rocks or by the snow.

Other peaks ascended, several more than once, were President, Des Poilu (formerly Habel), Marpole, Kerr, Michael's Peak, Burgess, Wapta and Field.

In addition to the easy ordinary route, Mount Wapta was twice climbed on the northeastern face without a guide, a most interesting and worthy climb.

The large Yoho glacier was found to be shrinking rapidly, the ice cave no longer existed and the face of the snout was exceedingly steep.

The annual meeting discussed among other matters, the erection of some form of memorial of the members of the club who had served in the war. It was suggested that a hut be built at some point suitable for a climbing base.

The Swiss guides lent to the club by the Canadian Pacific Railway were Edward Feuz and Christian Hasler. Their services were untiring and greatly appreciated.

There were present members of the English, Swiss and American Alpine Clubs, the B. C. Mountaineering Club, Appalachian Mountain Club, Colorado Mountain Club, the Mazamas, the Sierra Club, and the Royal Geographical Society.

APPENDIX No. 3.

REPORT OF THE ACTING SUPERINTENDENT OF REVELSTOKE PARK,
E. N. RUSSELL, FIELD, B.C.

The principal work done at Revelstoke park during the year was the continuation of the motor road to the summit of Mount Revelstoke. It was hoped to complete this road during the season but owing to the great difficulty of obtaining labour and the early onset of winter this was not possible. The new work completed this year was as follows: Fully completed road, from station 643 to station 648. Stumping, grubbing and burning from station 643 to 663. Partly cleared from station 663 to 714. Seven culverts completed between stations 643 and 663. All cribbing completed up to station 661.

The auto road was well patronized by the many motorists of Revelstoke, as well as by many visitors to the district, amongst whom was His Royal Highness the Prince of Wales and Party, who included this drive in his itinerary while on his tour of Western Canada. Fourteen cars in all started with the Royal party, but unfortunately three of these were unable to make the full trip, owing to engine or other trouble. On reaching the end of the road as at present constructed at station 635, a stop was made, and His Royal Highness with a few suitable words kindly unveiled a memorial tablet dedicating the Revelstoke National park for the use and enjoyment of the Canadian people. This tablet was set in concrete on the top of a huge granite boulder to the right of the roadway in a prominent position on a switchback turn of the road overlooking the Illecillewaet valley. Light refreshments were then served by some of the ladies of Revelstoke, after which the party returned to the special train awaiting them, His Royal Highness and a number of others walking the whole of the return journey down the trail.

A new cabin for the use of the warden was constructed near the summit of mount Revelstoke, on the shores of Balsam lake, together with a small stable. It is the intention to extend our telephone line to this cabin in the near future, thus insuring prompt communication with the town of Revelstoke, which will be of great service in cases of forest fires, or other emergencies. Only one fire occurred this year which was easily suppressed, being caught in its early stages, and entailing an expenditure of only \$16.

The Mount Revelstoke trail was thoroughly gone over and repaired by the park warden assisted by some outside help, but extensive repairs will have to be undertaken next season on that portion of this trail between Balsam lake and lakes Eva and Miller, as the corduroy work has about served its time and is becoming very rotten. It is hoped next season to construct a new trail from the western boundary of the park to the summit of mount Revelstoke, and thus open up a large portion of the park now inaccessible. The proposed new trail would start at a point near Twelve-mile creek on the Big Bend road, thence running in a westerly direction passing the Surprise lakes, Butte lake, and Caribou lake and from there along the summit of the mountain to lakes Eva and Miller. This proposed trail will pass through some magnificent scenery.

In the fall of the year some improvements were undertaken on the ski grounds. This is now probably without exception, the finest ski-jumping hill on the American continent and attracts the finest jumpers in the world to the annual contest held under the auspices of the Revelstoke Ski Club. The Canadian amateur record is held by a Revelstoke man, who this year surpassed his own former record jump of 177 feet by making a standing jump of 185 feet on this hill. Several jumps of over 200 feet

were made by professionals, the world's champion jumper making one jump of 212 feet, which is within one foot of his record jump. Winter sports in the Revelstoke park are fast forging ahead, and in a very short time have assumed a prominent position in this respect. Thousands of visitors now come to witness the annual tournament.

It is anticipated that the boundary lines of this park, which at present are not definitely settled, will be shortly adjusted. The matter of finally deciding upon the area which is to be included within the park is a most important one, and I trust that the department will not allow another season to pass without clearly defining it. I would recommend that when a decision has been reached, a proper survey of these lines be made, and the lines cut out for a width of at least six feet, in order that they may be clearly marked. This I believe would be necessary on account of the difference between the park regulations and the laws governing the lands surrounding the park.

APPENDIX No. 4.

REPORT OF THE SUPERINTENDENT OF JASPER PARK, COL. S. MAYNARD ROGERS, JASPER, ALTA.

The game resources of Jasper park are increasing steadily year by year. It is estimated that there are now in the park at least 5,000 Rocky Mountain sheep (bighorn) and the increase has brought about the beneficial result that the surplus is gradually moving outside of park boundaries thus furnishing to the legitimate sportsman good shooting in the areas adjoining.

From reports received from our warden service and from outside sources it is estimated that outside of park areas on the eastern slopes alone, from the forks of the McLeod to the Southesk river in the southeast corner of the park, there were approximately 2,000 bighorn last fall. Parties shooting there were able to get in most cases the full complement allowed by law and in every case splendid heads were procured without any difficulty.

Mrs. Mead, of Chicago, and her 16-year-old son procured their four heads in the first twenty-four hours, one especially large head over 18 inches among the number.

To the north of the park near the Snake Indian river, Miss Foster, her brother and a friend procured with their guides, 10 splendid sheep, 7 goat, and Mr. Foster also shot a very fine caribou. This all goes to prove that the protection afforded by our warden service has been satisfactory.

ROCKY MOUNTAIN GOAT.

These magnificent but very timid animals are also increasing enormously and the overflow will soon afford good sport to the legitimate hunter.

MOOSE.

Moose are increasing rapidly on our easterly foothills and an old moose or two is usually to be found in the Rocky river, the Jack lake and Pyramid lake areas as well as on Signal mountain.

Mule deer, white-tailed and black-tailed deer are also increasing satisfactorily but not as rapidly as could be wished, principally owing to the numbers of large coyotes or "brush wolves," as they are locally termed.



Redoubt and Dungeon Peaks across Amethyst Lake: Bastion Peak at right in distance.
Photo Howard Palmer.



Bastion Peak (distance) between Cliffs of Dungeon Peak and Peak ascended by Palmer
and Carpe, W. of Surprise Point. Photo Howard Palmer.

BEAR—GRIZZLY, BLACK AND CINNAMON.

Bears are increasing rapidly, and the time will soon come when we shall have to take steps to lessen their numbers as they are getting very bold.

WAPITI OR ELK.

A small band of these interesting and beautiful animals is to be found in the Southesk country where they have taken refuge from the depredations of Indians and breeds residing outside the park limits. They are being carefully safeguarded so far as our small warden service will permit. During the year 100 of these stately animals were procured from Yellowstone National park, Wyoming. This shipment, in spite of being nearly seven days on the train, suffered a loss of only 11 which is considered to be a very good record, especially in view of the fact that nearly 50 per cent were fully grown.

FUR-BEARING ANIMALS—BEAVER, MARTEN, MINK, ETC.

These valuable animals continue to thrive and are increasingly numerous.

BIRD LIFE.

There does not appear to be any great increase of bird life in the park, which may partly be accounted for by the depredations of coyotes, wolves and lynx which have had to look to this source for food supply in the absence of rabbits now reappearing after their usual seventh year diminution.

We were very much encouraged by the settling down and breeding in Jasper park of about fifty wild geese during the past season, the first time on record since 1912. In every case they raised young and appeared to realize that they were safe from mankind as they became quite tame towards the end of the season.

FISH.

Fish appear to be increasing satisfactorily and new lakes are being continually opened up which add to our fairly long list of good fishing waters. The sound policy of restocking lakes, which has been consistently followed, will undoubtedly have a very material effect within the next few years.

PREDATORY ANIMALS.

The wardens are steadily decreasing predatory animals such as wolves, coyotes and lynx by energetic measures of shooting and trapping, but owing to the lack of rabbits, migratory bands of wolves and coyotes continue to come into the park area in search of food supply.

In a recent long winter trip through the mount Robson area returning by the Snake Indian river, one of our wardens saw numerous wolverine tracks. All possible steps will be taken to eradicate this dangerous predatory animal.

VISITORS.

Jasper park was honoured by many distinguished visitors during 1919; first by the premier visit of a Vice-Regal party, including His Excellency the Governor General, accompanied by Her Grace the Duchess of Devonshire, Lady Dorothy Cavendish, Miss Egerton, Miss Saunders, Captain McMillan and Captains Cator and Lord Haddington, A.D.C.

Their Excellencies spent three days in the park climbing and visiting several of the beautiful outlying districts. They expressed great pleasure in their visit, particularly enjoying the Maligne canyon. The party climbed to the top of Whistler mountain and nearly to the top of Muhegan, approximately 9,000 feet in altitude. They also visited Pyramid lake and lakes Patricia, Beau Vert, Edith, Annette and others, and were kind enough to express the hope of returning for a more prolonged stay during 1920.

We were also honoured by visits from several parties of distinguished scientists, viz., Major H. Chapman, Secretary-Treasurer of the United States Alpine Club, accompanied by Dr. Howard Palmer and Mr. Carpe, who spent some weeks in exploring the Tonquin valley and the Fraser icefields. They carried out a considerable amount of topographical and photographic work which will be immensely valuable to the park.



Visit of His Excellency the Duke of Devonshire, Governor General of Canada, to Jasper Park, 1919.

Dr. Chamberlin, of the Department of Geology, University of Chicago, also spent some weeks exploring the Pyramid mountain and mount Edith Cavell regions. Dr. Chamberlin and his confrère succeeded in climbing mount Edith Cavell, a feat that has only been accomplished once before. They were able to carry out this most difficult task with comparative ease by discovering a new and much easier route than the ones so often tried in the past which defeated many mountain climbers with international records, such as A. L. Mumm and others.

The following extract from a letter from Dr. Chamberlin gives his impression of the district:—

“Mount Cavell was our finest day’s work. Specializing in that phase of geology which deals with the structure of mountain ranges, I have, under the pretext of professional necessity, climbed mountains on all the continents except Africa and Antarctica, but I can recall only two other days among several score of these moun-

tain ascents which gave such complete satisfaction as that spent on mount Cavell. We both of us marvelled at the exquisite beauty of the mountains to the south. It would take too long to state just wherein the charm lies, but it impressed me as one of the grandest parts of the North American continent. It is certainly to be hoped that some time in the near future trails will be opened up so that visitors can, without too great labour, get up into the midst of that wild and rugged country."

TOURIST ACCOMMODATION.

The park was crowded beyond capacity of accommodation all through the past season, and the want of a suitable and modern hotel is a serious handicap. The "Tent City," with accommodation for sixty guests, were compelled to put out the "no accommodation" sign nearly every train day.



Interior of an Enormous Ice Cave. Athabaska Glacier.

Photo Byron Harmon.

UNITED STATES EDITORIAL ASSOCIATION.

On Sunday, the 3rd of August, the United States Editorial Association were entertained to a buffalo barbecue and luncheon at Lac Beau Vert, and the 239 members apparently thoroughly enjoyed the unique entertainment provided, as well as the interesting scenic features in the vicinity of Jasper, including Maligne canyon and the beautiful chain of lakes between Jasper and the canyon, which they were able to explore in the short time at their disposal.

FOREST FIRES.

The season of 1919 proved a most unfortunate one with regard to forest fires, of which we had an unusually large number. The majority, fortunately, were small in area and were checked in time to prevent spreading. One serious fire started in British Columbia between Yellowhead and Lucerne. This fire covered approximately

an area of 10 square miles, but fortunately the loss in timber was not very large from a commercial standpoint, although it sadly marred the scenic features from Yellowhead east almost to Mount Edith Cavell station.

The only other large fire was in the Rocky River district opposite the mouth of Jack creek. This fire was evidently caused by the carelessness of tourists or fishermen. With the exception of this Rocky river fire, the remainder were all set by locomotives, which unfortunately were obliged, owing to war conditions, to revert to coal-burning instead of oil-burning engines as in previous years. It is not likely that we will escape a large number of railway-set fires until oil-burning engines are re-established.

ROAD CONSTRUCTION.

Owing to the difficulty in obtaining labour, the only new road construction carried out was a small portion of the Edith Cavell road, which was done by contract. It is hoped that the coming season will see the completion of this road to lake Edith Cavell, one of the most interesting scenic points in Jasper park.

The same applied to our trail construction, but it is hoped that during the coming season there will be no difficulty in securing ample labour for our different park requirements.

TRAILS.

New trail construction was carried out between Athabaska falls and Sunwapta cabin, the start of a permanent trail to the source of the Athabaska via Brazeau lake, which when constructed, will be very popular with the tourists who wish to take the long and most interesting trip from Jasper to Banff or vice versa.

At Brazeau lake the trail branches off to the eastward and it is hoped the construction will be completed this year of the permanent round trip trail from Sunwapta to Brazeau lake, thence to the Southesk country and back to the Rocky river over the Osborne pass to the Jack lake trail. This is one of the most urgently required trails for proper fire and game protection in this park and in addition, it will make an ideal round trip for tourists.

CABINS.

It is expected to construct this coming year four new cabins at points of interest in Jasper park to augment the ones at present erected and which have proved very popular with tourists in the park. These cabins are utilized by the wardens when required and they also provide accommodation for tourists on their trips through the park.

TELEPHONE LINES.

Our park telephone system is at a stage when a complete reinstallation of telephone poles is absolutely necessary, as the main trunk line from Yellowhead to Errington is the old Foley, Welch and Stewart construction line installed many years ago.

MIETTE HOT SPRINGS.

These wonderful curative springs were very largely patronized, principally by the miners from Pochontas, Brulé mines and Bedson, and many cures of rheumatic affections were reported. There is as yet no accommodation at the springs but we expect to construct a suitable shelter this year.

PERMANENT BRIDGE OVER ATHABASKA RIVER AT JASPER.

A small work gang of returned soldiers has been steadily employed for the past few months in putting in heavy concrete abutments and doing the necessary rock excavation on the east bank preparatory to the installing of a much needed steel bridge at this point, the only means of access at high water from Jasper headquarters to the south and east portions of the park.

APPENDIX No. 5.

REPORT OF THE SUPERINTENDENT OF WATERTON LAKES PARK,
GEORGE A. BEVAN, WATERTON PARK, ALTA.

On June 23, 1919, I assumed the duties of superintendent relieving Mr. F. E. Maunder, Superintendent of Revelstoke park and late acting superintendent here.

The tourist traffic during the past season was very gratifying. During the latter part of June and throughout the months of July and August, the summer cottages were all occupied and the camping grounds were in constant demand.

WATERTON TOWNSITE.

As all the desirable building lots for cottage purposes in the townsite had been leased, it was necessary to plot a new subdivision. This work was undertaken by E. S. Martindale, D.L.S., of Ottawa, and 80 new lots were laid out by him in a most desirable situation along the base of the mountain. The interest taken by the public was very gratifying and as soon as these lots are made available for application, fifty per cent will be applied for and built on without delay, more inquiries than this having already been received.

The streets and avenues of this new subdivision have been cut out and cleared and are now ready for stumping and grading. This work will be undertaken in the early spring.

OFFICIAL BUILDINGS.

A new office 20 by 20 with a storeroom 16 by 16 was erected by the department. This was attractively built of peeled logs and finished inside with beaver board. A superintendent's residence was also completed of the same type as the above.

ROADS.

Owing to the need of strict economy consequent upon war expenses, very little was undertaken in the way of new roads. One new road was laid out by the highway engineer's division from the north boundary of the park to Waterton bridge, a distance of nearly two miles. Owing to the early arrival of winter, one-half of this work only was finished; the balance will be completed this coming year.

TRAILS.

No new trail work was undertaken, the existing trails being kept in good condition by the warden service.

I regret the lack of good saddle trails in the vicinity of the lake for the convenience of the tourists, and would recommend that the trail laid out by Mr. J. M. Wardle in 1917, connecting Akamina pass trail with the boundary trail via Cameron lake, be included in the plan of work for the season of 1920.



Above Cameron Lake looking east Waterton Lakes Park.

Photo. F. H. Riggall.



Pass Creek Summit. Waterton Lakes Park.

Photo F. H. Riggall

TELEPHONES.

The main line was extended from the old office to the new building, a distance of approximately $1\frac{1}{4}$ miles and an extension line built to the warden's cabin on Pass creek, approximately $2\frac{1}{4}$ miles. All the wardens' stations in the park proper are now in direct telephone communication with headquarters, but connections will have to be built in the future to outlying cabins for fire emergencies.

The department has entered into contract with the Provincial Government to build a 'toll line connecting Waterton park with Pincher Creek during the next season. This connection has long been desired.

GRAZING.

Permits were granted during the season for 2,916 head of horses and cattle. These grazing privileges are much appreciated by the local stockmen and many more permits could have been granted had we been able to accommodate them.

FIRE PROTECTION.

The season of 1919 was excessively dry and forest fires in the West were very prevalent and disastrous. Eight broke out in this park. Of the first six we received early notice and were able to put them out without much trouble or expense. The two latest fires, viz., those at Oil City and Belly river respectively, occurred at the end of the summer, when fierce winds were blowing, and owing to the fact that we did not receive early notice they gained unusual headway and considerable damage resulted. The chief warden and his staff are to be congratulated upon the manner in which they fought and controlled these fires.

Two small pumping units were received during the season, which will be of great assistance to our fire fighting equipment in the future. These are so constructed that they are easily portable either by man power or by automobile. Unfortunately, the necessary equipment for these units was not here at the time of the above-mentioned fires.

GAME.

That the preservation of the game has been very satisfactory is proved by the large numbers of game which are from year to year becoming tamer and are more frequently visible to the tourists. There have been no violations of the game regulations during the season.

RECREATION.

Boating and fishing are among the most popular attractions with visitors to this park.

There are three motor launches and twenty-nine rowboats licensed for hire during the season, besides several other row and motor boats belonging to private individuals. The fishing is very good and many individuals obtained their limit during the season. Several trout weighing between twenty and thirty pounds were taken from the lake.

VISITORS.

During the season a marked increase was shown in the number of tourists from the United States Glacier National park, who visited this park by automobile and pack-horses. It is reported that many others would have come had they been able to secure means of transportation. On July 26 the Alberta Automobile League made a tour from Lethbridge, staying here for two days. By arrangement with head office, sixty tents were provided and pitched for their accommodation.

The total number of visitors to the park for the year 1919 was approximately 9,000.

APPENDIX No. 6.

REPORT OF THE SUPERINTENDENT OF BUFFALO PARK, A. G. SMITH,
WAINWRIGHT, ALTA.

FARMING OPERATIONS.

An experiment of growing rape along with the oats was tried out this year, the object being not only for after-pasture, but particularly for the benefit to the land where it is impossible to have a proper rotation of crops. In all about 440 acres were sown, 410 acres at the south end and 30 acres at the north end. The rape grew exceedingly well, and had the season been a normal one, the experiment would have been very satisfactory, but owing to the drought the oats were short and light with the result that the rape leaves gave us some trouble when cutting with the binders. However, the rape leaves in the straw made splendid feed for the Buffalo and the stubble made good pasture for the horses running out all winter.

About 75 acres of our crop were stacked for green-feed and from the balance we threshed 6,300 bushels of oats, which was, in view of the nature of the season, considered a fair crop. Early in the summer some 200 acres, off which two crops had been taken, were summer-fallowed and put in shape for the next spring.

HAYING.

The hay on the Ribstone meadow was light but the quality was good and we succeeded in securing about 400 tons. We also stacked about 130 tons of upland hay in the main park to be fed to the animals in the home paddock and the cattalo enclosure.

In addition to the hay cut in the park for our own requirements we also granted permits to settlers covering the cutting of 500 tons, and as the permits were granted on the basis of one ton per head of stock and not more than 20 tons to any one farmer, we were in this way able to divide up the available hay among a large number of farmers, and I can assure you it was of much assistance to them.

GRAZING LEASES.

During the year those sections of the reserve outside the main fence on both the east and west sides of the park were leased for a period of one year, and a considerable revenue was thereby received.

FIRE GUARDING.

All work in connection with the ploughing and discing of fire guards was done by our own teams. There were no fires in the park during the year.

TIMBER PERMITS.

A large number of the settlers again took the opportunity of procuring dry wood in the park. Permits for 500 cords were taken out and as a permit for twenty-five cords costs only twenty-five cents, the benefit the farmers derive from this privilege is of no small importance.

Permits were also granted to bona fide farmers for the cutting of willow fence pickets along the banks of Battle river and Ribstone creek. This is the first year we have granted permits for fence pickets and the privilege has been much appreciated as permits covering 9,500 fence pickets were taken out during the past winter.

HORSES.

There were 42 head of horses shipped to this park from Kingston, Ont., in December to be wintered here. Altogether we have now about 100 head, including colts. I consider we have been very fortunate with our horses as there has been no loss.

WILD ANIMALS.

All the wild animals have done well throughout the year. The natural increase in buffalo, 1,148, has gone beyond all expectations. The elk also showed a good increase, adding 27 to their number. The moose, deer and antelope also show an increase.

The decrease in buffalo for the year was 41. Of this number 21 were slaughtered and 20 found dead. The number of wild animals now in the park is as follows:—Buffalo, 4,668; elk, 124; mule deer (estimated), 431; moose, 24; antelope, 4; cattalo, 15; yak, 4; domestic cattle, 15; total, 5,285.

The yak were brought in from Banff during the year, and they, along with the domestic stock and cattalo, are kept in separate pens of the Cattalo Enclosure where



“Port Royal” Cattalo Bull, Buffalo Park.

the experiment of cross-breeding is being carried out. A rather interesting incident in connection with this experiment was the raising of a buffalo calf along with a domestic calf by a domestic cow. Both calves thrived very well and although the buffalo calf was taken off the cow last fall it still follows its foster-mother at every opportunity.

The winter just ending has been a very long one with the deep snow and considerable crust. About 2,000 buffalo, mostly bulls, were left out in the main park during the winter to rustle their feed, as it was not considered advisable to have the whole herd in winter quarters. Early in March, about the time we usually turn the herd out of winter quarters on to the summer range, we had to bring about 800 of those that were left out into winter quarters to be fed, and haul feed out into the big park for those still out, but I am pleased to report the herd being brought safely through one of the hardest winters known in Western Canada, and in good condition.

WILD BIRDS.

Wild geese and ducks appeared to be more plentiful this year than at any previous time; in fact birds of many kinds seem to realize the protection that awaits them inside the park boundaries and it would now appear as though each year we will see more of the wild bird life.

COYOTES.

The hunting of coyotes with dogs has been constantly kept up, the number killed this year being 52, and it can be noticed that these noxious animals are not nearly so plentiful as they were a few years ago.

VISITORS.

Each year brings many new visitors to Buffalo park. The number entering by the Wainwright entrance for the year was 6,330; another 1,000 visited the park entering by the other gates and all expressed the greatest interest and pleasure in seeing such a wonderful herd of wild animals.

APPENDIX No. 7.

REPORT OF THE SUPERINTENDENT OF ELK ISLAND PARK,
ARCHIBALD COXFORD, LAMONT, ALBERTA.

We started haying operations the first of August and put up about 280 tons which, with about 40 tons carried over from the previous year, gave us sufficient for the winter feed. The hay meadow at Goose Lake was enclosed with a three-strand barbed wire fence. This will prevent the numerous cattle that range on the forest reserve from roaming over the meadow.

VISITORS.

We had a few campers during the summer and a large number of visitors who generally spent the day picnicking, boating and bathing. Different organizations come here for their annual picnic and these find the lack of a sports ground a great drawback. I think grounds fit for ball games, etc., should be attended to at once, considering the demand there is for one and the small expense it would entail. The visitors for the year numbered 3,922.

ANIMALS.

The percentage of increase in the buffalo is not so large this year as the previous year. We find with all the animals increasing each year we are crowded for ample pasture and I would strongly recommend extending the boundary of the park at least six miles south into the Cooking Lake Forest Reserve. The buffalo have come through this severe winter in excellent shape. The rider has seen more animals this winter than usual; he reports the deer and moose in fine shape and the elk fair.

The total number of animals in the park is as follows: Buffalo, 198; moose, 63; elk (estimated), 150; deer, 125.

APPENDIX No. 8.

REPORT OF THE SUPERINTENDENT OF POINT PELEE PARK, F. H. CONOVER, LEAMINGTON, ONT.

Point Pelee has long been a household word throughout western Ontario, not only on account of its scenic attractiveness, its novel and shady driveways, but because of its charming and unique character which distinguishes it from every other area in Canada. It is, as is well known, the most southerly point in the Dominion, and as a result it possesses both a fauna and flora of peculiar interest to the scientist and nature lover. Its abundant and semi-tropical vegetation includes many species not found elsewhere in this country and it is the only spot within the northern range of many southerly breeding birds. It is also in the direct path of one of the great routes of migration and its extensive marshes and dense undergrowth form an ideal resting place for many forms of bird life in migration as well as a breeding place throughout the season.

It is a matter for much congratulation that through the public-spirited efforts of local societies and the authorities concerned with the conservation of wild life at Ottawa, this unique area has been permanently set aside. While early conditions of soil and forest have to some extent disappeared it still retains a wealth of plant and animal life which makes it, as I have said, one of the most interesting places in Canada.

EROSION BY STORMS.

During the past season heavy storms considerably damaged the shore line, resulting in extensive erosions along the eastern shore of the point. Numerous large trees, several of them three feet in diameter, and many red cedars were uprooted and swept out into the lake by the strong currents. The present frail shore line was once an extensive deposit of massive gravel beds, but unfortunately a great part of these had been removed for commercial purposes before the reservation of the area.

IMPROVEMENTS.

The general attractiveness of the park has been heightened by the removal of driveway debris and decayed undergrowth. It was also found necessary from time to time to clear away the flotsam and wreckage left behind by severe storms.

To provide the public with drinking water two drive wells were sunk with gratifying results. These have been covered with attractive arbours and several purple martin houses, built according to departmental specifications, erected. A number of martins very soon took up their abode in these and it is hoped they will return during the coming season, bringing others with them.

WILD LIFE.

While the park has only been established for a comparatively short period, it shows already gratifying results as a wild life sanctuary. It affords a perfect environment for quail (bob white) as well as for the English ringneck pheasant. The extensive runs and subways throughout, interlaced with a profusion of creeping vines, mammoth weed growth and wild rose, ensure excellent protection against heavy snows throughout the winter as well as covert from predaceous birds and animals.

In 1918 the warden constructed several artificial brush shelters. These were stocked with grain and served as resorts for the birds during the severe storms. A similar provision will be made for the ensuing winter.

It is noted that the quail have increased to over 100 since the inception of the park. This is most encouraging and indicates that we will soon have large numbers of these birds under the existing methods of protection.

A large variety of song birds annually visit Point Pelee in migration and numerous species nest here. The marshes with their wild grass, bullrushes and cane reeds afford nesting grounds for many game and other birds, but unfortunately those bird homes are frequently destroyed by marsh fires. At the time of writing thousands of deserted nests, somewhat similar in formation to that of the oriole, are visible, suspended in the flags. During the past season marsh fires also destroyed the natural covert of mallards, teal and wood ducks.

The banning of September shooting in Point Pelee park by federal enactment has undoubtedly stimulated the increase of many forms of wild life. Last September large numbers of teal and some wood ducks, which were apparently on their southern migration, took shelter in the park during this month. They were followed later by members of the dwindling remnants of the ruddy ducks, by the black ducks, the mallard and the less artful red head.

The perceptible increase in many kinds of bird life during migration last year, including rice birds, jack snipe, shore waders, wild ducks and geese, would seem to indicate that the Migratory Birds Convention Act is already beginning to bear good results.

The production of wild rice as food for the shoal feeders and of wild celery for the deep water birds, Canvasback, Red Head, and American Scaup which is now being undertaken should materially assist in increasing the numbers of waterfowl. In this connection the maintenance of normal water levels not only for wild fowl alone but also for muskrat is of great importance. Unless the fresh water inlets are kept open stagnation ensues with a resulting decrease or destruction of the plant life which serves as food for both.

The destruction caused by carp in the waters is widely evident. These destroy the sustenance that rightfully belongs to the waterfowl. The efforts now being undertaken at your suggestion will, it is hoped, soon put an end to these pests.

Point Pelee marsh also provides an ideal habitat for the muskrat. At the close of 1919 it was estimated that there were 2,000 dwellings with approximately six inhabitants in each or a total of 12,000 muskrats in the park, independent of bank and bog habitations. At prevailing prices for skins this makes Point Pelee a valuable fur producing area.

One hundred and thirty-four permits were issued for shooting in the open season for ducks, October 1 to December 14, inclusive.

Motor traffic to the park was greater than during any previous season and it is hoped that expenditure will be authorized during the coming year for the speedy completion of necessary roadways and for the accommodation of automobiles, especially near the south end of the Point. There were over five hundred cars in one day within the parking zone, not including those in the central portions of the park.

APPENDIX No. 9.

THE ST. LAWRENCE ISLANDS PARKS.

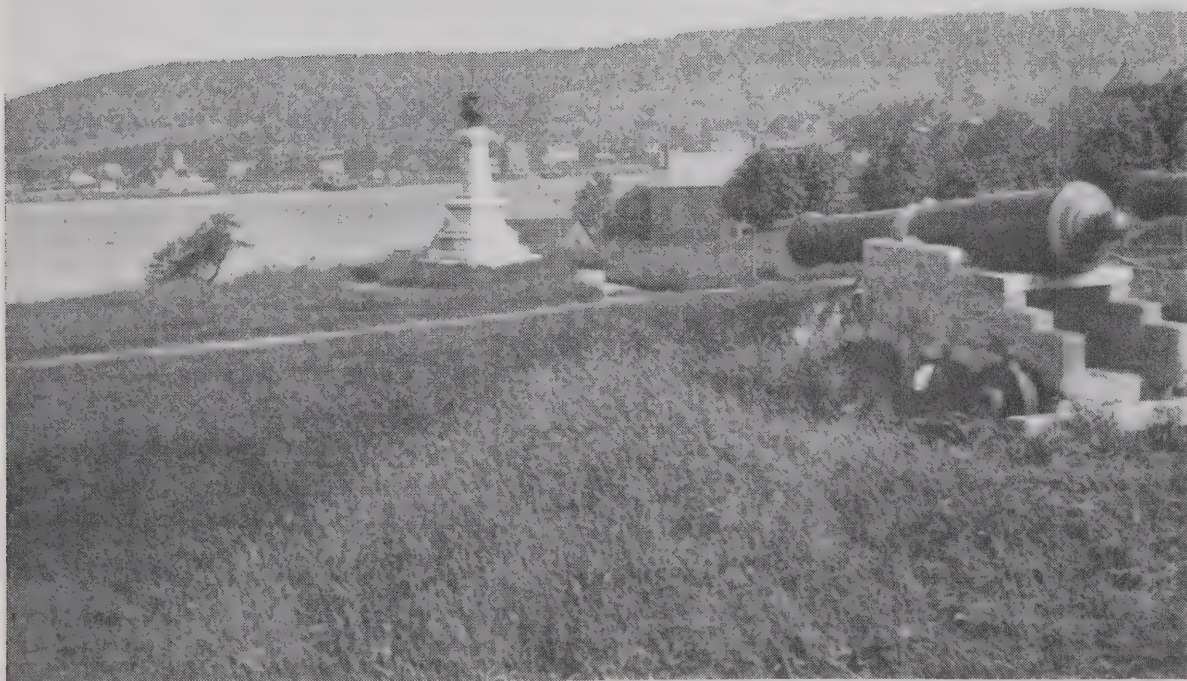
An important addition was made to these parks during the year by the purchase of what was formerly known as Doran's or Sheep island, directly opposite the town of Morrisburg. This island was originally part of the St. Regis Indian Reserve but had been leased by the Indians for a term of years to a private individual. At the

expiration of the lease in October, 1916, the Department of the Interior acquired it from the Department of Indian Affairs and by Order in Council dated December 3, 1919, it was proclaimed a Dominion park. The island has been named Broder park in memory of the late Andrew Broder, who for many years represented Dundas in the House of Commons. It is one of the finest of the island reservations, covering about twenty acres, well wooded and possessing a good bathing beach as well as suitable grounds for baseball and other sports. Several campstoves encased in cement, tables, benches and other conveniences necessary for the comfort of picknickers and campers have been provided. It was not possible to construct a pavilion in time for the season, but a large tent 24 x 48 has been erected to serve as a protection to visitors against rain or storm.

APPENDIX No. 10.

REPORT OF THE HONORARY SUPERINTENDENT OF FORT ANNE PARK, L. M. FORTIER, ANNAPOLIS ROYAL, N.S.

The year just ended has been one of steady progress at Fort Anne. The museum has gone on growing in extent and interest, and the recent repairs to the administration building (the old officers' quarters in the fort, built by the Duke of Kent in 1798)



Looking out over the Ramparts of Fort Anne towards Granville Ferry.

have made it possible to effect a much better arrangement of the exhibits, so that they can now be seen to proper advantage by visitors. Something over 3,000 persons visited Fort Anne during the year, of whom 2,181 registered their names and were given personal attention.

NATIONAL PARKS AND RESERVES.

ADMINISTERED BY THE DOMINION PARKS BRANCH, DEPARTMENT OF THE INTERIOR.

Name.	Location.	Date of Establishment.	Area.	Special Features.
Rocky Mountains park.	Alberta, east slope of Rockies.	1885	2,751 square miles.	Ideal mountain playground containing the two famous resorts, Banff and Lake Louise, with much of finest scenery of east slope of Central Rockies. Massive formation of stratified sedimentary rock, upper slopes bare, worn and castellated, or glacier crowned, lower slopes covered with luxuriant forests and flower carpeted uplands. Glacier-fed lakes of exquisite colouring, wild deer, goat, sheep, elk, etc. Recreations: alpine climbing, walking tours, riding, boating, swimming, golf, tennis and motoring, winter sports—skiing, tobogganing, ski-joring, snow-shoeing, skating, etc.
Yoho park.	British Columbia, west slope of Rockies.	1886	476 square miles.	Rugged scenery of west slope of Rockies, narrow transverse valley of Kickinghorse, precipitous peaks, large number with permanent ice caps or glaciers, wonderful Yoho valley with falls over 1,200 feet in height. Four great snowfields at head. Natural bridge, Emerald lake, lakes O'Hara and McArthur.
Glacier park.	British Columbia, summit of Selkirks.	1886	468 square miles.	More massive formation of older range. Peaks worn down almost to timber line crowned with innumerable glaciers; luxuriant forests, alpine flower gardens. One of the best centres for alpine climbers and students of glacier formations, Illecillewaet and Asulkan valleys and glaciers, Nakimu caves, Marion lake, Rogers and Baloo passes.
Revelstoke park.	British Columbia.	1914	95 square miles.	Fourteen-mile motor drive up Mt. Revelstoke affording panoramic views of Columbia and Illecillewaet valleys, Clach-na-Coodin ice-field, lakes Eva and Millar. Winter sports resort, game preserve.
Kootenay park.	British Columbia.	1920	587 square miles.	Highway park extending 5 miles on each side of new Vermilion-Sinclair section of Banff-California highway. Passes through wonderful and practically unknown mountain scenery. Historic rivers, towering canyons, Briscoe range, Ice lake, Sinclair canyon and Radium Hot Springs. Bear, deer, caribou and sheep.
Jasper park.	Northern Alberta.	1907	4,400 square miles.	Immense mountain wilderness, partly unexplored, rich in historic associations. Numbers of unclimbed peaks, glaciers, snow fields, canyons, innumerable lakes of wonderful colouring. Athabaska valley, Maligne lake, gorge and canyon, Mt. Edith Cavell, Miette Hot Springs, Mt. Robson, highest known peak in Canada. Largest big game sanctuary in world.
Waterton Lakes park.	Southern Alberta, adjoining U.S. Glacier Park.	1895	423 square miles.	Mountains noted for beauty of colouring; lovely lakes, waterfalls and snow-peaks, excellent trout fishing, favourite camping resort.

St. Lawrence Islands.....	Ontario.....	1905	140 acres.....	Thirteen islands and one mainland reservation among the Thousand Islands of the St. Lawrence river equipped for the use of summer campers and visitors.
Broder park	Ontario.....	1919	20 acres	Additional island opposite Morrisburg recently added to above reservation.
Pt. Pelee park.....	Ontario, on lake Erie.	29th May, 1918		Most southerly point in Canada; northern limit of many migratory birds; summer resort and bird reserve; unique fauna and flora.

ANIMAL PARKS AND RESERVES.

Buffalo park.....	Near Wainwright, Alberta....	1907	153.75 square miles	Fenced enclosure, home of the Government's great buffalo herd—5,000 buffalo, also moose, elk, deer, yak and cattalo.
Elk Island park.....	Near Lamont, Alberta.....	1899	16 square miles.	Smaller fenced enclosure contains about 200 buffalo, also moose, elk and deer.
Foremost Antelope reserve.	Southern Alberta.....	Reserved by Order of Minister.	9 square miles.	Fenced reserve containing about 100 antelope.

HISTORIC PARKS.

Fort Howe.....	New Brunswick.....	1914	19 acres	Associated with earliest history of province. Site of landing of U.E. Loyalists.
Fort Anne.....	Nova Scotia.....	1917		Fort Annapolis Royal played important part in early history of Canada, first vessel constructed and first grist-mill erected in North America, the centre of civilization and progress in Acadia and of the fiercely contested struggle between France and England for the possession of the continents.

LACKING 1920/21

